

*CITY OF STOCKTON*  
INITIAL STUDY/  
PROPOSED MITIGATED NEGATIVE DECLARATION

FOR THE

UNIVERSITY OF THE PACIFIC  
STUDENT HOUSING PROJECT  
UPPER DIVISION EXPERIENCE  
East of Pershing Avenue and South of Brookside Road  
Stockton, CA

October 5, 2015

*Prepared for:*

CITY OF STOCKTON  
Community Development Department  
345 N El Dorado Street  
Stockton, CA 95201  
(209) 937-8266

*CITY OF STOCKTON*  
INITIAL STUDY/  
PROPOSED MITIGATED NEGATIVE DECLARATION

FOR THE

UNIVERSITY OF THE PACIFIC  
STUDENT HOUSING PROJECT  
UPPER DIVISION EXPERIENCE

East of Pershing Avenue and South of Brookside Road  
Stockton, CA

October 5, 2015

*Prepared for:*

CITY OF STOCKTON  
Community Development Department  
345 N El Dorado Street  
Stockton, CA 95201  
(209) 937-8266

*Prepared by:*

BASECAMP ENVIRONMENTAL  
115 S School Street, Suite 14  
Lodi, CA 95240



# TABLE OF CONTENTS

	Page
Chapter 1.0 INTRODUCTION	1-1
1.1 Project Brief	1-1
1.2 Purpose of Initial Study	1-1
1.3 Project Background	1-2
1.4 Environmental Evaluation Checklist Terminology	1-7
1.5 Summary of Environmental Effects and Mitigation Measures	1-10
Chapter 2.0 PROJECT DESCRIPTION	2-1
2.1 Project Brief	2-1
2.2 Project Location	2-1
2.3 Project Objective	2-2
2.4 Project Details	2-2
2.5 Demolition	2-8
2.6 Permits and Approvals	2-8
Chapter 3.0 ENVIRONMENTAL EVALUATION FORM	3-1
3.1 Introduction to Environmental Analysis	3-1
3.1.1 General Project Information	3-1
3.1.2 Environmental Factors Potentially Affected	3-2
3.1.3 Lead Agency Determination	3-2
3.1.4 Notes On Evaluation of Environmental Impacts	3-3
3.2 Aesthetics	3-4
3.3 Agriculture and Forestry Resources	3-9
3.4 Air Quality	3-10
3.5 Biological Resources	3-17
3.6 Cultural Resources	3-20
3.7 Geology and Soils	3-25
3.8 Greenhouse Gas Emissions	3-27
3.9 Hazards and Hazardous Materials	3-33
3.10 Hydrology and Water Quality	3-36
3.11 Land Use and Planning	3-41
3.12 Mineral Resources	3-45
3.13 Noise	3-46
3.14 Population and Housing	3-50
3.15 Public Services	3-51
3.16 Recreation	3-55
3.17 Transportation/Traffic	3-56

3.18	Utilities and Service Systems	3-71
3.19	Mandatory Findings of Significance	3-75
Chapter 4.0 LIST OF PREPARERS, SOURCES		
4.1	Document Preparers	4-1
4.2	Documents Cited	4-1
4.3	Internet Sources Cited	4-3
4.4	Persons Consulted	4-3
LIST OF TABLES		
1-1	Summary of Environmental Impacts and Mitigation Measures	1-11
3-1	Predicted Air Pollutant Emissions Comparison to SJVAPCD Significance Thresholds	3-13
3-2	Summary of Ambient Noise Measurement Data, UOP Student Housing	3-47
LIST OF FIGURES		Page
1-1	Regional Map	1-3
1-2	Vicinity Map	1-4
1-3	USGS Map	1-5
1-4	Aerial Photo Map	1-8
1-5	Assessor's Parcel Map	1-9
2-1	Illustrative Site Plan	2-3
2-2	Site Plan	2-4
2-3	Second Floor Plan	2-5
2-4	Perspectives	2-6
2-5	Elevations	2-7
3-1	Visual Simulation #1, Looking South from Brookside Road	3-7
3-2	Visual Simulation #2, Looking Northwest from UOP Bridge	3-8
3-3	General Plan Map	3-43
3-4	Zoning Map	3-44
3-5	Study Intersections	3-60
3-6	Study Roadway Segments	3-61
APPENDICES		
A.	Air Quality Modeling Results	
B.	Biology Inventory Report	
C.	Cultural Resources Record Search	
D.	Noise Impact Report	
E.	Traffic Impact Analysis	

## LIST OF ACRONYMS USED IN THIS DOCUMENT

AAQS	Ambient Air Quality Standards
APN	Assessor's parcel number
ARC	Architectural Review Committee
AST	Above-ground Storage Tank
ASTM	American Society for Testing and Materials
BAAQMD	Bay Area Quality Management District
BMPs	Best Management Practices
Cal Water	California Water Service Company
CARB	California Air Resources Board
CCAP	Climate Change Action Plan
CEQA	California Environmental Quality Act
CHMIRS	California Hazardous Materials Incident Report System
CIP	Capital Improvement Plan
CISP	Climate Protection Impact Study Process
CNDDDB	California Natural Diversity Data Base
CO	carbon monoxide
CO <sub>2</sub>	carbon dioxide
CUPA	Certified Unified Program Agency
CVFED	Central Valley Flood Evaluation and Delineation
CVP	Central Valley Project
dBA	A-weighted decibels
DRP	Development Review Process
DWSP	Delta Water Supply Project
EIR	Environmental Impact Report
EMFs	electromagnetic fields
EPA	U. S. Environmental Protection Agency
FEMA	Federal Emergency Management Agency
FINDS	Facility Index System/Facility Identification Initiative Program Summary Report
GAMAQI	Guide for Assessing and Mitigating Air Quality Impacts
GHG	greenhouse gases
GPEIR	General Plan Environmental Impact Report
HAZMAT	Hazardous Material
HAZNET	Hazardous Waste Information System
HIST UST	Historical Underground Storage Tank
IS/MND	Initial Study/Mitigated Negative Declaration
ISO	Insurance Services Office
ISR	Indirect Source Rule
ITMMs	Incidental Take Minimization Measures
kV	kilovolt
L <sub>dn</sub>	Day-Night Sound Level

LOS	Level of Service
LUSD	Lincoln Unified School District
LUST	Leaking Underground Storage Tank
MGD	million gallons per day
MMT	million metric tons
MS4	Municipal Separate Storm Sewer System
NAHC	Native American Heritage Commission
NOI	Notice of Intent
NOx	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
ODS	owners, developers and successors in interest
PEA	Preliminary Environmental Assessment
PM10	particulate matter 10 microns or less in diameter
PM2.5	particulate matter 2.5 microns or less in diameter
PSD	Public Safety Department
RCRA	Resource Conservation and Recovery Act
RCRA-LQG	RCRA Large Quantity Generator
ROG	reactive organic gases
RWCF	Regional Wastewater Control Facility
RWQCB	Regional Water Quality Control Board
SB 5	Senate Bill 5
SF	square feet
SFD	Stockton Fire Department
SHMP	(UOP) Strategic Housing Master Plan
SJMSCP	San Joaquin County Multi-Species Open Space and Habitat Conservation Plan
SJVAPCD	San Joaquin Valley Air Pollution Control District
SPD	Stockton Police Department
SUSD	Stockton Unified School District
SWMP	Storm Water Management Program
SWPPP	Storm Water Pollution Prevention Plan
SWQCCP	Storm Water Quality Control Criteria Plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminants
UDE	Upper Division Experience
UOP	University of the Pacific
UST	Underground Storage Tank
WDID	Waste Discharger's Identification Number

# 1.0 INTRODUCTION

## 1.1 Project Brief

---

The University of the Pacific (UOP) located in Stockton, CA proposes development of the Upper Division Experience student housing project (“project”), which would provide 381 student housing beds in 142 studio, two-bedroom and four-bedroom apartment units and related resident community facilities, on the existing UOP campus. The project site is currently occupied by tennis courts and a portion of parking Lot 13 located south of the UOP Physical Plant. The project site is located immediately north of the Calaveras River, east of Pershing Avenue and south of Brookside Road. The site is connected to the central core of the main UOP campus by an existing pedestrian, bicycle and light vehicle bridge. The general location of the project is shown on Figures 1-1 through 1-5 on the following pages.

The proposed project would transition the 4.1-acre project site from its existing uses into a new student residential facility, including proposed student apartments, resident staff apartments, social and study areas, outdoor gathering spaces, offices and other site improvements. The project involves construction of a four-story building with two wings and encompassing approximately 151,517 SF of floor area. Building height will be comparable to the Monagan and Chan Family residence halls north of Brookside Road; Monagan and Chan are three-story residential structures with additional building height from pitched roofs. The proposed units would be available for occupancy in the fall of 2017.

Vehicle access to the project would be via the existing gated entry to the University Townhomes on Brookside Road and the University Townhomes parking area; parking demand would be met by modification of the existing parking area, which will be restriped and enlarged to address existing and new student housing parking demands. The project will be served by existing Cal Water and City utilities as well as electrical, gas and communication utilities located at the site or in adjacent streets.

## 1.2 Purpose of Initial Study

---

The California Environmental Quality Act (CEQA) requires that public agencies document and consider the potential environmental effects of the agency’s actions that meet CEQA’s definition of a “project.” Briefly summarized, a “project” is an action that has the potential to result in direct or indirect physical changes in the environment. A project includes the agency’s direct activities as well as activities that involve public agency approvals or funding. Guidelines for an agency’s implementation of CEQA are found in the “CEQA Guidelines” (Title 14, Chapter 3 of the California Code of Regulations).

Provided that a project is not exempt from CEQA, the first step in the agency’s consideration of its potential environmental effects is the preparation of an Initial Study. The purpose of an Initial Study is to determine whether the project would involve “significant” environmental effects as defined by CEQA and to describe feasible mitigation measures that would avoid significant effects or reduce them to a less than significant level. In the event that the Initial Study does not identify significant effects, or identifies mitigation measures that would reduce all of the significant effects of the project to a less than significant level, the agency prepares a Negative

Declaration. If this is not the case – that is, if the project would involve significant effects that cannot be readily mitigated - the agency must prepare an Environmental Impact Report (EIR). The agency may also decide to proceed directly with the preparation of an EIR without preparation of an Initial Study.

The proposed student housing facility is a “project” as defined by CEQA and is not exempt from CEQA consideration. The City of Stockton determined that the project involves the potential for significant environmental effects and required preparation of this Initial Study. The Initial Study describes the proposed project and describes its environmental setting; it discusses the potential environmental effects of the project and identifies feasible mitigation measures that would reduce the potentially significant environmental effects of the project to a less than significant level. The Initial Study considers the project’s potential for significant environmental effects in the following subject areas:

- Aesthetics
- Agricultural Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Geology and Soils
- Greenhouse Gases
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Mineral Resources
- Noise
- Population and Housing
- Public Services Recreation
- Transportation/Traffic
- Utilities and Service Systems
- Mandatory Findings of Significance

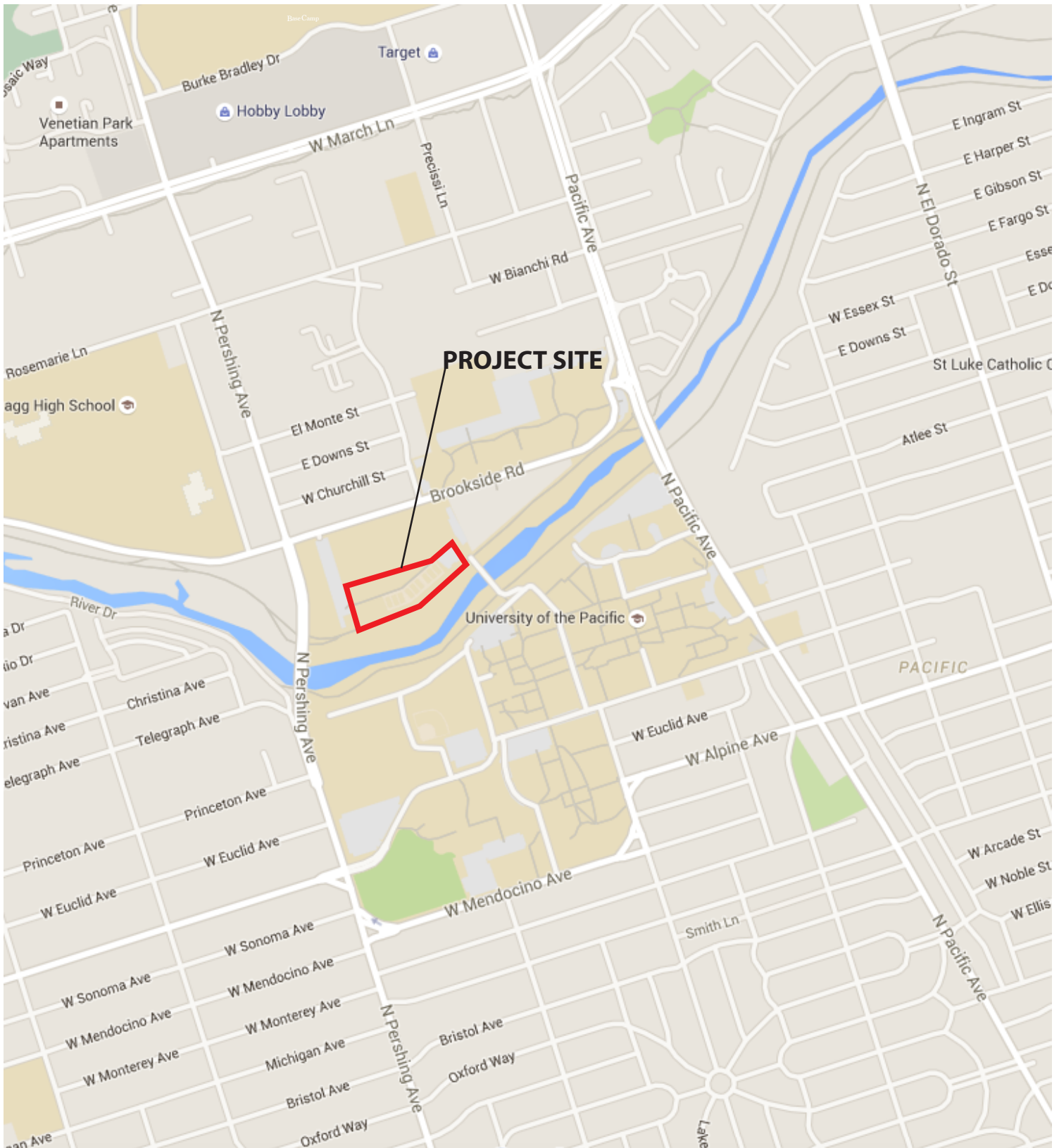
The Initial Study concludes that the project would have significant environmental effects, but that all of these effects would be reduced to a less than significant level with recommended mitigation measures. As a result, the City has prepared a Mitigated Negative Declaration and notified the public of the City’s intent to adopt the Initial Study/Mitigated Negative Declaration. As of the distribution of the Initial Study/Mitigated Negative Declaration (IS/MND) for public review, the applicant has accepted all of the recommended mitigation measures. The time available for comment on the IS/MND is shown in the Notice of Intent.

### 1.3 Project Background

---

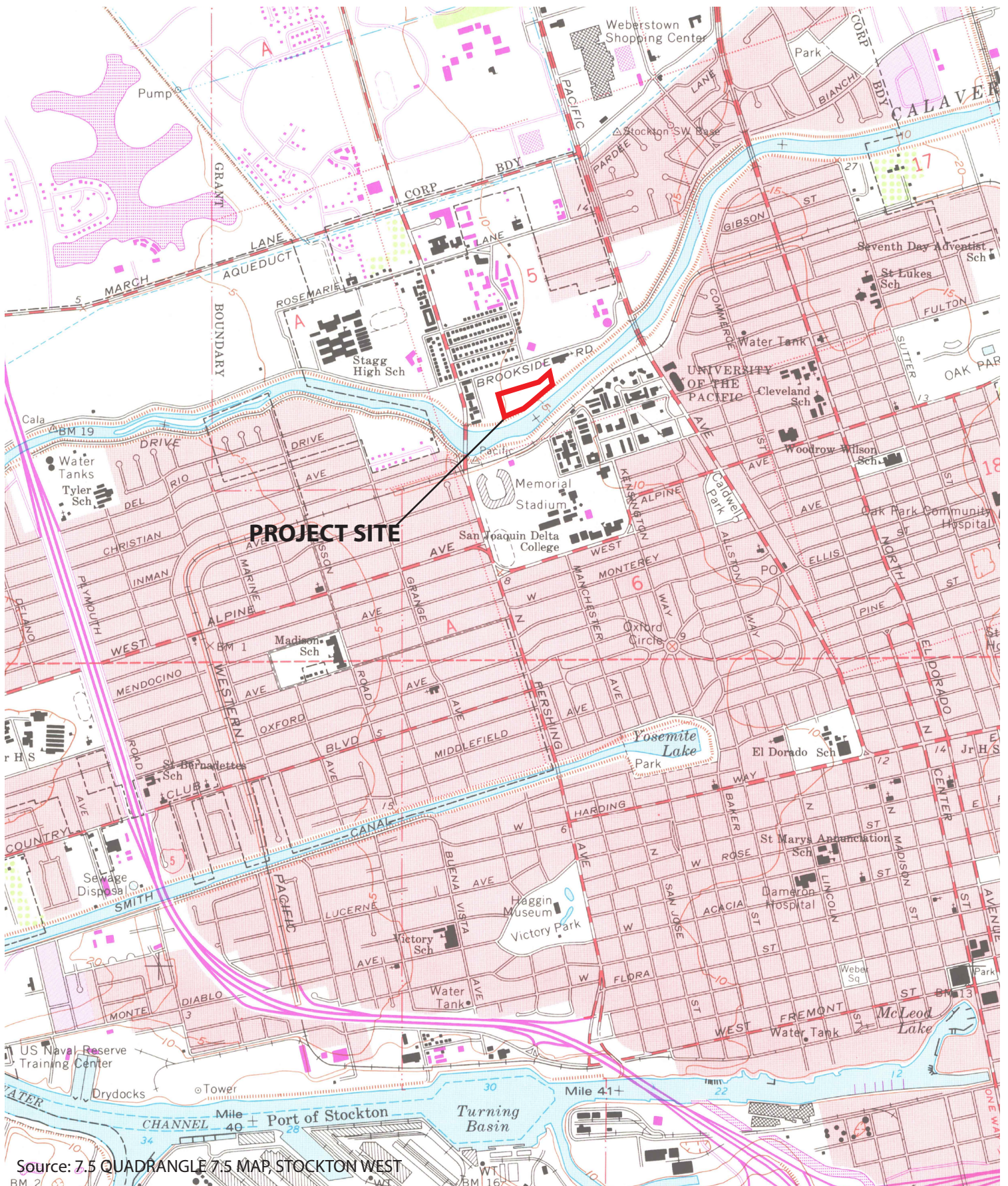
UOP is a nationally-ranked private university established in 1851. The UOP main campus was relocated to Stockton in 1924; at this time, UOP was one of the first universities to incorporate on-campus student housing. The Stockton campus currently accommodates an enrollment of approximately 6,000 undergraduate and graduate students and 450 faculty on the 175-acre Stockton campus. UOP provides more than 80 undergraduate majors and 17 graduate programs in nine schools and colleges. Law and dental programs are located in separate campuses in Sacramento and San Francisco. UOP supports 15 NCAA Division 1 athletic programs and more than 140 clubs and recreational organizations. The average class size is approximately 20 students.





Source: GOOGLE MAPS







The UOP Board of Regents has adopted a unified long-term (2051) vision for the Stockton and other campuses known as the *2011 University Facility Master Plan* (2011 Master Plan). The 2011 Master Plan addresses the needs, visions and facility requirements of multiple academic, athletic, support and other programs, including student housing based on several “Guiding Parameters,” including:

**Enrollment:** Maintain current levels, with modest increase of graduate, professional, executive and continuing education students on Stockton campus . . .

**Student Housing:** Increase residential capacity in support of Learning Community model, by adding apartment-style housing for single and married students on Stockton and Sacramento campuses . . .

The 2011 Master Plan envisions the addition of 500-600 beds in the area north of the Calaveras River over the long-term. The 2011 Master Plan recognizes and provides for the relocation of the existing tennis complex on the project site across the River to the Consolidated Athletics facility on the site for the former Stagg Stadium, which is currently under construction. The 2011 Master Plan is explicitly a long-term planning document and does not constitute an approval of any specific project by the Board of Regents; such approvals “must be requested on a project-by-project basis.”

In early 2014, UOP initiated development of a more-detailed long-term student housing plan known as the *2015 Strategic Housing Master Plan* (2015 SHMP) that would supplement the 2011 Master Plan vision for student housing and would enhance the on-campus student living experience in support of UOP’s student retention efforts. The 2015 SHMP identifies a program of new housing development and renovation of existing student housing facilities that would ultimately meet specific goals for on-campus housing by class level. Housing for first-year students is known as the First Year Experience, and likewise for second-year students. Housing for Juniors, Seniors and graduate students is known as the Upper Division Experience (UDE). The plan is based on assessment of market demands, student housing options, pricing and amenities; on-campus housing would need to be competitive in the housing marketplace in order to meet UOP retention goals.

The existing on-campus UOP student housing capacity totals 2,085 beds in buildings of varying age and condition. Over the long-term, the 2015 SHMP would renovate existing housing, decommission some housing facilities and construct new housing to provide a net future total of 2,290 student housing beds, an increase of approximately 10%, as follows:

First Year Experience	809 beds
Second Year Experience	534 beds
Upper Division Experience	738 beds
Greek Experience	209 beds

Initially, a new housing complex – the proposed project – would be added to the current UOP student housing stock that would provide “swing space” for on-campus housing while other existing housing facilities are taken off-line to be renovated. Once renovation activities are complete, the project would be used for its long-term purpose of enhancing the Upper Division Experience. The 2015 SHMP anticipates the demolition of aging underutilized housing facilities such as the University Townhomes west of the project site in addition to the Southwest and

Tower view housing facilities. However, the 2015 SHMP does not establish a timeline for demolition.

The proposed project is the only element of the 2011 Master Plan and the 2015 SHMP proposed for approval and construction at this time. For the purposes of this CEQA Initial Study, the “proposed project” consists of changes to the UOP campus as it exists today, which is the “baseline condition” for the environmental impact analysis. The project will involve the addition of 381 beds to the existing UOP housing supply and elimination of 47 existing parking stalls in the Lot 13 parking area located south of the UOP Physical Plant building.

Future plans for student housing described in the 2011 Master Plan and the 2015 SHMP are not considered a part of the proposed project; although these projects are described in plans prepared by the University, they are not projects that have received the specific approval of the Board of Regents required by the 2011 Master Plan. These projects are also subject to City of Stockton permit requirements similar to the proposed project and are therefore subject to CEQA review before they can be approved. Future student housing plans will, however, be considered in the analysis of cumulative impacts in the Initial Study.

A similar student housing project was considered by UOP and the City of Stockton in 2012. An Initial Study/Mitigated Negative Declaration (IS/MND) for that project was prepared for the City by Kleinfelder, Inc. The IS/MND was published by the City and circulated for public and agency review and comment in March and April 2012, and that document is cited in Chapter 4.0. The 2012 IS/MND was utilized extensively in the preparation of this document; however, the authors of this document are entirely responsible for its content.

## 1.4 Environmental Evaluation Checklist Terminology

---

The Initial Study repeatedly uses a few terms and acronyms that are defined here for the reader’s convenience. A complete list of acronyms used in the Initial Study is shown following the Table of Contents.

CDD	The Stockton Community Development Department. The CDD is responsible for processing of the project’s permit applications and for independent review and acceptance of the IS/MND.
IS/MND	This Initial Study/Mitigated Negative Declaration.
ODS	The owners, developers and successors-in-interest, meaning the project applicant, property owners, future project owners and other parties with interest or responsibility for the project, now and in the future.

The project’s potential environmental effects are evaluated in the Environmental Evaluation Checklist shown in Chapter 3. The checklist includes a list of environmental considerations against which the project is evaluated. For each question, the City determines whether the project would involve: 1) No Impact, 2) a Less Than Significant Impact, 3) a Less Than Significant Impact With Mitigation Incorporated, or 4) a Potentially Significant Impact.

A Potentially Significant Impact occurs when there is substantial evidence that the project would involve a substantial adverse change to the physical environment, i.e., that the environmental effect may be significant, and mitigation measures have not been defined that would reduce the impact to a less than significant level. If there are one or more Potentially Significant Impact entries in the Initial Study, an EIR is required.







A Less Than Significant Impact occurs when the project would involve effects on a particular resource, but the project would not involve a substantial adverse change to the physical environment, and no mitigation measures are required.

An environmental effect that is Less Than Significant With Mitigation Incorporated is a Potentially Significant Impact that can be avoided or reduced to a less than significant level with the application of mitigation measures.

A determination of No Impact is self-explanatory.

This IS/MND prescribes mitigation measures for the potentially significant environmental effects of the project. Some mitigation measures are regulatory requirements established by the City and other agencies and routinely implemented in conjunction with new development. These mitigation measures are referred to in this document as “Required Mitigation Measures.” Mitigation measures that are not already established in law and practice are identified as “Additional Mitigation Measures.”

## 1.5 Summary of Environmental Effects and Mitigation Measures

The following pages contain Table 1-1, Summary of Impacts and Mitigation Measures. The table summarizes the results of the Environmental Checklist Form and associated narrative discussion shown in Chapter 3.0.

The potential environmental impacts of the proposed project are summarized in the left-most column of this table. The level of significance of each impact is indicated in the second column. Mitigation measures proposed to minimize the impacts are shown in the third column, and the significance of the impact, after mitigation measures are applied, is shown in the fourth column.

TABLE 1-1  
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Potential Impact	Significance Before Mitigation Measures	Mitigation Measures	Significance After Mitigation Measures
<b>3.2 AESTHETICS</b>			
a) Effects on Scenic Vistas	LS	None required	
b) Effects on Scenic Routes and Resources	NI	None required	
c) Effects on the Visual Character or Quality	LS	None required	
d) Light and Glare	LS	None required	
<b>3.3 AGRICULTURE AND FORESTRY RESOURCES</b>			
a) Agricultural Land Conversion	NI	None required	
b) Zoning and Williamson Act	NI	None required	
c, d, e) Timberland Conversion and Zoning	NI	None required	
<b>3.4 AIR QUALITY</b>			
a) Air Quality Plan Consistency	NI	None required	
b, d) Construction Emissions	PS	<p>AIR-1 The project shall comply with all applicable requirements of SJVAPCD Regulation VIII, including the following:</p> <p>a) Air emissions related to the project shall be limited to 20% opacity or less, as defined in SJVAPCD Rule 8011. The dust control measures specified below shall be applied as required to maintain the Visible Dust Emissions standard.</p> <p>b) The contractor shall pre-water all land clearing, grubbing, scraping, excavation, land leveling, grading, cut and fill, and phase earthmoving.</p> <p>c) The contractor shall apply water, chemical/organic stabilizer/suppressant, or vegetative ground cover to all disturbed areas, including unpaved roads, throughout the period of soil disturbance.</p> <p>d) The contractor shall restrict vehicular access to the disturbance area during periods of inactivity.</p> <p>e) The contractor shall apply water or chemical/organic stabilizers/suppressants, construct wind barriers and/or cover exposed potentially dust-generating materials.</p> <p>f) When materials are transported off-site, the contractor shall stabilize and cover all materials to be transported and maintain six inches of freeboard space from the top of the container.</p>	LS

TABLE 1-1  
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Potential Impact	Significance Before Mitigation Measures	Mitigation Measures	Significance After Mitigation Measures
		g) The contractor shall remove carryout and trackout of soil materials on a daily basis unless it extends more than 50 feet from site; carryout and trackout extending more than 50 feet from the site shall be removed immediately. The use of dry rotary brushes is expressly prohibited except where preceded or accompanied by sufficient wetting to limit the visible dust emissions. Use of blower devices is expressly forbidden. If the project would involve more than 150 construction vehicle trips per day onto the public street, additional restrictions specified in Section 5.8 of SJVAPCD Rule 8041 will apply.	
		AIR-2: The project shall comply with applicable requirements of SJVAPCD Rule 9510, including provision of on-site construction mitigation measures, or payment of ISR fees.	
c) Regional Criteria Pollutant Emissions.	LS	None required	
c) Cumulative Emissions, Project Construction.	PS	AIR-1 and AIR-2 above	LS
c) Carbon Monoxide Emissions	LS	None required	
c) Air Toxics Impacts	LS	None required	
e) Odor Impacts	NI	None required	
<b>3.5 BIOLOGICAL RESOURCES</b>			
a) Effects on Special-Status Species	PS	BIO-1 The ODS shall mitigate for the proportionate loss of potential wildlife habitat from the project site by applying for coverage, paying any required fee, and implementing Incidental Take Minimization Measures (ITMMs) as required by the adopted San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP).	LS
b) Riparian and Other Sensitive Habitats	NI	None required	
c) Wetlands	NI	None required	
d) Fish and Wildlife Movement	NI	None required	
e) Local Biological Requirements	NI	None required	
f) Conflict with Habitat Conservation Plans	NI	None required	
<b>3.6 CULTURAL RESOURCES</b>			
a) Historical Resources	PS	CULT-1 and CULT-2 below.	LS
b) Archaeological Resources	PS	CULT-1 and CULT-2 below.	LS
c) Paleontological Resources	PS	CULT-1 and CULT-2 below.	LS



TABLE 1-1  
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Potential Impact	Significance Before Mitigation Measures	Mitigation Measures	Significance After Mitigation Measures
d) Human Burials	PS	<p>CULT-1 If any subsurface cultural or paleontological resources are encountered during construction of the project, all construction activities in the vicinity of the encounter shall be halted until a qualified archaeologist, or paleontologist as appropriate, can examine these materials, make a determination of their significance and, if significant, recommend further mitigation measures that would reduce potential effects to a less than significant; such measures could include 1) preservation in place or 2) excavation, recovery and curation by qualified professionals. The Stockton CDD shall be notified, and the ODS shall be responsible for retaining qualified professionals, implementing recommended mitigation measures and documenting mitigation efforts in a written report to the CDD, consistent with the requirements of the CEQA Guidelines.</p> <p>CULT-2 If human remains are encountered at any time during the development of the project, all work in the vicinity of the encounter shall halt, and the County Coroner and the Stockton CDD shall be notified immediately. The Coroner must contact the Native American Heritage Commission if the remains have been identified as being of Native American descent. At the same time, the ODS shall retain a qualified archaeologist to evaluate the archaeological implications of the find and recommend any mitigation measures that may be required under CEQA; the ODS shall implement those recommendations and documenting mitigation efforts in a written report to the CDD.</p> <p>CULT-3 In order to ensure that the project will not affect Native American resources, UOP will voluntarily consult with Native American representatives for the project area as a part of project planning and construction.</p>	LS
<b>3.7 GEOLOGY AND SOILS</b>			
a-1) Fault Rupture Hazards	NI	None required	
a-2, 3) Seismic Hazards	LS	None required	
a-4) Landslides	NI	None required	
b) Soil Erosion	LS	Hydrology and Water Quality Mitigation Measures specified in Section 3.10	
c) Geologic Instability	NI	None required	
d) Expansive Soils	LS	None required	
e) Adequacy of Soils for Sewage Disposal	NI	None required	
<b>3.8 GREENHOUSE GAS EMISSIONS</b>			
a) Significance of GHG Emissions	LS	None required	
b) Consistency with GHG Reduction Plans	LS	None required	

TABLE 1-1  
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Potential Impact	Significance Before Mitigation Measures	Mitigation Measures	Significance After Mitigation Measures
<b>3.9 HAZARDS AND HAZARDOUS MATERIALS</b>			
a, b) Upset and Transportation Hazards	NI	None required	
c) Hazardous Materials Use or Emissions Near Schools	NI	None required	
d) Hazardous Materials Sites	LS	None required	
e, f) Aircraft Operations Effects	NI	None required	
g) Emergency Response Effects	NI	None required	
h) Wildland Fire Hazards	NI	None required	
<b>3.10 HYDROLOGY AND WATER QUALITY</b>			
a, c, f) Erosion, Sediment and Water Quality	PS	<p>HYDRO-1 The ODS shall prepare and implement a Storm Water Pollution Prevention Plan (SWPPP) for the project and file a Notice of Intent (NOI) with the State Water Resources Control Board prior to commencement of construction activity. The SWPPP shall be available on the construction site at all times.</p> <p>HYDRO-2 The ODS shall incorporate an Erosion Control Plan consistent with all applicable provisions of the SWPPP within the site development plans.</p> <p>HYDRO-3 The ODS shall submit the SWRCB Waste Discharger's Identification Number (WDID) to the City prior to approval of development or grading plans.</p> <p>HYDRO-4 The ODS shall submit a Storm Water Quality Control Criteria Plan that shall include post-construction Best Management Practices as required by Title 13 of the SWQCCP. The Storm Water Quality Control Criteria Plan will be reviewed and approved by the MUD prior to the Certificate of Occupancy.</p> <p>HYDRO-5 The ODS shall execute a Maintenance Agreement with the City for stormwater BMPs prior to receiving a Certificate of Occupancy. The ODS must remain the responsible party and provide funding for the operation, maintenance and replacement costs of the proposed treatment devices built for the subject property.</p> <p>HYDRO-6 The ODS shall comply with any and all requirements of, and pay all associated fees as required by, the City's Storm Water Pollution Prevention Program as set forth in its NPDES Storm Water Permit.</p>	LS
b) Groundwater Supplies	NI	None required	
d, e) Drainage and Runoff	LS	None required	

TABLE 1-1  
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Potential Impact	Significance Before Mitigation Measures	Mitigation Measures	Significance After Mitigation Measures
g) Flood Exposure	NI	None required	
h) Impacts on Floodways	NI	None required	
i) Dam Failure Hazards	LS	None required	
j) Seiche, Tsunami and Mudflow	NI	None required	
<b>3.11 LAND USE AND PLANNING</b>			
a) Division of Established Community.	NI	None required	
b) Consistency with Land Use Plans and Zoning	NI	None required	
c) Conflict with Habitat Conservation Plan	NI	None required	
<b>3.12 MINERAL RESOURCES</b>			
a) Availability of Mineral Resources of State Value	NI	None required	
b) Availability of Mineral Resources of Local Value	NI	None required	
<b>3.13 NOISE</b>			
a) Exposure to Noise Exceeding Local Standards	LS	None required	
b) Exposure to Groundborne Noise	NI	None required	
c) Permanent Increase in Ambient Noise	LS	None required	
d) Temporary or Periodic Increase in Ambient Noise	PS	NOISE-1 Temporary noise impacts resulting from project construction shall be minimized by restricting hours of operation by noise-generating construction equipment to 7:00 a.m. to 7:00 p.m. Monday through Saturday. No construction shall occur on Sundays or national holidays without a permit from the City.	LS
e, f) Aircraft Operations Noise	NI	None required	
<b>3.14 POPULATION AND HOUSING</b>			
a) Population Growth Inducement	LS	None required	
b, c) Displacement of Housing or People	NI	None required	

TABLE 1-1  
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Potential Impact	Significance Before Mitigation Measures	Mitigation Measures	Significance After Mitigation Measures
<b>3.15 PUBLIC SERVICES</b>			
a) Fire Protection Impacts	PS	SERV-1 The ODS shall incorporate access, water supply and other fire suppression and emergency access/response needs in the proposed project design.	LS
		SERV-2 The ODS shall install fire hydrants and water distribution facilities that will provide fire flows that are adequate to support the City's existing ISO rating and that conform to adopted Building Code Fire Safety Standards for all of the uses proposed within the project area.	
b) Police Protection Impacts	PS	SERV-3 The ODS shall pay Public Facility Fees to defray capital facilities costs associated with expanding law enforcement.	LS
		SERV-4 The ODS shall coordinate with PSD as required to establish adequate security and visibility of the construction site.	
		SERV-5 Project landscaping along the building exterior and parking areas shall be designed and maintained as required to facilitate adequate visibility to support law enforcement.	
c) Schools Impacts	LS	None required	
d) Parks Impacts	LS	None required	
e) Other Public Facilities Impacts	LS	None required	
<b>3.16 RECREATION</b>			
a) Increased Use of Existing Recreational Facilities	LS	None required	
b) Recreational Improvements Involving Environmental Impacts	NI	None required	
<b>3.17 TRANSPORTATION/TRAFFIC</b>			
a) Consistency with Applicable Plans, Ordinances and Policies	LS	None required	
b) Conflict With Congestion Management Program	NI	None required	
c) Impact on Air Traffic Patterns	NI	None required	
d,e) Traffic Hazards, Emergency Access	NI	None required	
f) Conflict with Non-vehicular Transportation Plans	NI	None required	
<b>3.18 UTILITIES</b>			
a, e) Effects on Wastewater Systems	LS	None required	

TABLE 1-1  
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Potential Impact	Significance Before Mitigation Measures	Mitigation Measures	Significance After Mitigation Measures
b) Effects on Water Systems	LS	None required	
c) Effects on Stormwater Systems	LS	None required	
d) Water Supply	LS	None required	
f, g) Solid Waste Effects	LS	None required	
h) Regulated Utilities	LS	None required	
<b>3.19 MANDATORY FINDINGS OF SIGNIFICANCE</b>			
a) Environmental quality, species impacts, historical resources	PS	Mitigation measures listed in this IS/MND	LS
b) Cumulative impacts	LS	None required	
c) Other substantial adverse effects	NI	None required	

## 2.0 PROJECT DESCRIPTION

This chapter of the Initial Study provides a brief summary description of the project followed by information on the project setting and background and detailed descriptions of the location and physical elements of the project.

### 2.1 Project Brief

---

The University of the Pacific (UOP) located in Stockton, CA proposes development of the Upper Division Experience student housing project (“project”), which would provide 381 student housing beds in 142 studio, two-bedroom and four-bedroom apartment units and related community facilities, on the existing UOP campus. The project site is currently occupied by tennis courts and a portion of parking Lot 13 located south of the UOP Physical Plant. The project site is located immediately north of the Calaveras River, east of Pershing Avenue and south of Brookside Road. The site is connected to the central core of the main UOP campus by an existing pedestrian, bicycle and light vehicle bridge.

The proposed project would transition the 4.1-acre project site from its existing uses into a new student residential facility, including proposed student apartments, resident staff apartments, social and study areas, outdoor gathering spaces, offices and other site improvements. The project involves construction of a four-story building with two wings and encompassing approximately 151,517 SF of floor area. Building height will be comparable to the Monagan and Chan Family residence halls north of Brookside Road; Monagan and Chan are three-story residential structures with addition building height from pitched roofs. The proposed units would be available for occupancy in the fall of 2017.

Vehicle access to the project would be via the existing gated entry to the University Townhomes on Brookside Road and the University Townhomes parking area; parking demand would be met in part by the existing parking area, which will be restriped and enlarged to address project-related demands. The project will be served by existing Cal Water and City utilities as well as electrical, gas and communication utilities located in adjacent streets.

### 2.2 Project Location

---

The project site is located on the UOP main campus in the central portion of the City of Stockton in San Joaquin County. The project site is north of the Calaveras River, east of Pershing Avenue, south of Brookside Road, and west of Manchester Avenue. Existing uses of the project site include tennis courts, open space areas and university parking. The site is comprised of portions of Assessor’s Parcel Number (APN) 110-260-03 and 110-260-04. The existing UOP Physical Plant, a portion of APN 110-260-04, is not apart of the proposed project. The proposed project will require an adjustment of existing parcel lines so that the project can be located on a single parcel.

The location of the site is shown on Figures 1-1 through 1-5 located in Chapter 1.0. The site is located within Township 2 North, Range 6 East, MDBM as shown on the USGS Stockton West, California, 7.5-minute quadrangle map.

## 2.3 Project Objective

---

The objective of the project is to develop a new apartment-style student housing for upper division and graduate students of the University. Initially, the project will be utilized as “swing space” (temporary housing) allowing the University to progressively vacate and improve existing on-campus housing to meet current student needs as defined in its 2015 *Student Housing Master Plan*. UOPs residential improvement plans are discussed in more detail in Chapter 1. More specifically, the project objective is to obtain a (Planning) Commission Use Permit from the City of Stockton to develop the proposed student housing facilities.

## 2.4 Project Details

---

The project involves development of a four-story student housing building with two wings and related facilities that would accommodate a total of 381 students in 142 studio, two-bedroom and three-bedroom apartment units. In addition to residential units, the project would include resident staff apartments, social and study areas, outdoor gathering spaces, offices, other student services and related site improvements.

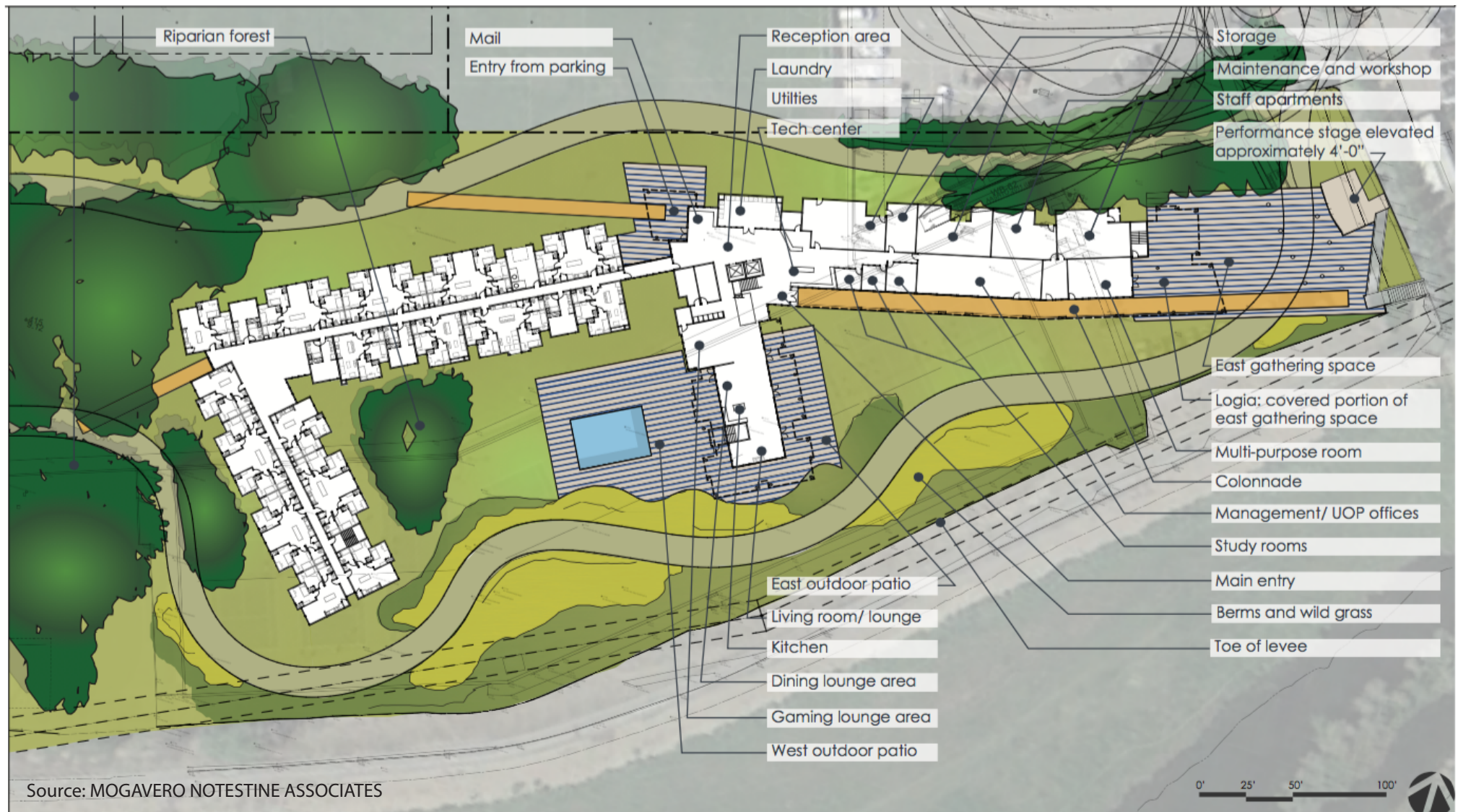
The west wing would be composed primarily of student housing units. The west wing would house a total of 208 students in 16 studio, 32 two-bedroom and 32 four-bedroom units, a total of 80 units. The east wing would accommodate primarily student housing but would host a range other related uses on the first floor including a multi-purpose room, study rooms, offices, staff apartments, laundry, maintenance facilities and storage. Student housing would occupy the second, third and fourth floors housing a total of 173 students in 11 studio, 21 two-bedroom and 30 four-bedroom units, a total of 62 units.

Both the east and west wings will be designed to meet CalGreen and LEED Silver specifications. Residential units in both wings would include kitchen facilities; nonetheless, student residents will still need to purchase a UOP meal plans for use at existing on-campus food service facilities.

A proposed single-story “indoor/outdoor living room” would extend south from within the east wing. The indoor portion of this facility would provide such facilities as a living room/lounge, study and classroom space, community kitchen and casual dining area, a technology café and a gaming lounge. The adjacent outdoor patio or deck area would provide a range of informal seating and tables and a pool. This facility may include a small student market or expanded vending area for UOP student and staff use; no public use is anticipated.

An additional planned outdoor area would extend east from the east wing. This area would provide a larger space and stage for special events as well as covered outdoor plaza for study, social and game space. These facilities would be joined by a colonnade shelter that would guide residents and visitors to the front door of the residence buildings and provide direct access to offices, study and multi-purpose rooms as well as the residence reception area.

The residential building would include a number of security features. All ingress would be via a single primary entrance with key card control. Several points of egress would be provided as required by the fire code. Nighttime security lighting and emergency call boxes would be located along new pathways. The building and related improvements would be architect-designed to incorporate the design themes of the UOP north campus. Landscaping surrounding the project would include turf, ornamental trees, and connecting pathways.





KEY NOTES:

- 1

LANDSCAPE AREA
- 2

UTILITY LINE POINT OF CONNECTION
- 3

STORM WATER VOLUME REDUCTION MEASURE
- 4

16' WIDE EMERGENCY VEHICLE ACCESS: STABILIZED DECOMPOSED GRANITE OVER AGGREGATE BASE
- 5

16' WIDE EMERGENCY VEHICLE ACCESS: 10' WIDE ASPHALT WITH 3' STABILIZED DECOMPOSED GRANITE SHOULDERS
- 6

45-FOOT OPENING WITH ROLLING LOCKABLE GATES
- 7

SCORED CONCRETE PAVING
- 8

FIRE HYDRANT
- 9

POOL
- 10

REMOVABLE BOLLARD
- 11

EXISTING PARKING LOT WITH NEW STRIPING
- 12

NEW PARKING AREA
- 13

STAGE
- 14

NEW FOUR-STORY STUDENT HOUSING
- 15

GRASS PAVE TURNOUT ENGINEERED FOR FIRE TRUCK PULLOUT
- 16

EXISTING ATHLETIC FIELD
- 17

REPLACE EXISTING GATE WITH NEW GATE
- 18

EXISTING ORNAMENTAL IRON FENCE
- 19

EXISTING BRIDGE TO MAIN CAMPUS (SOUTH)
- 20

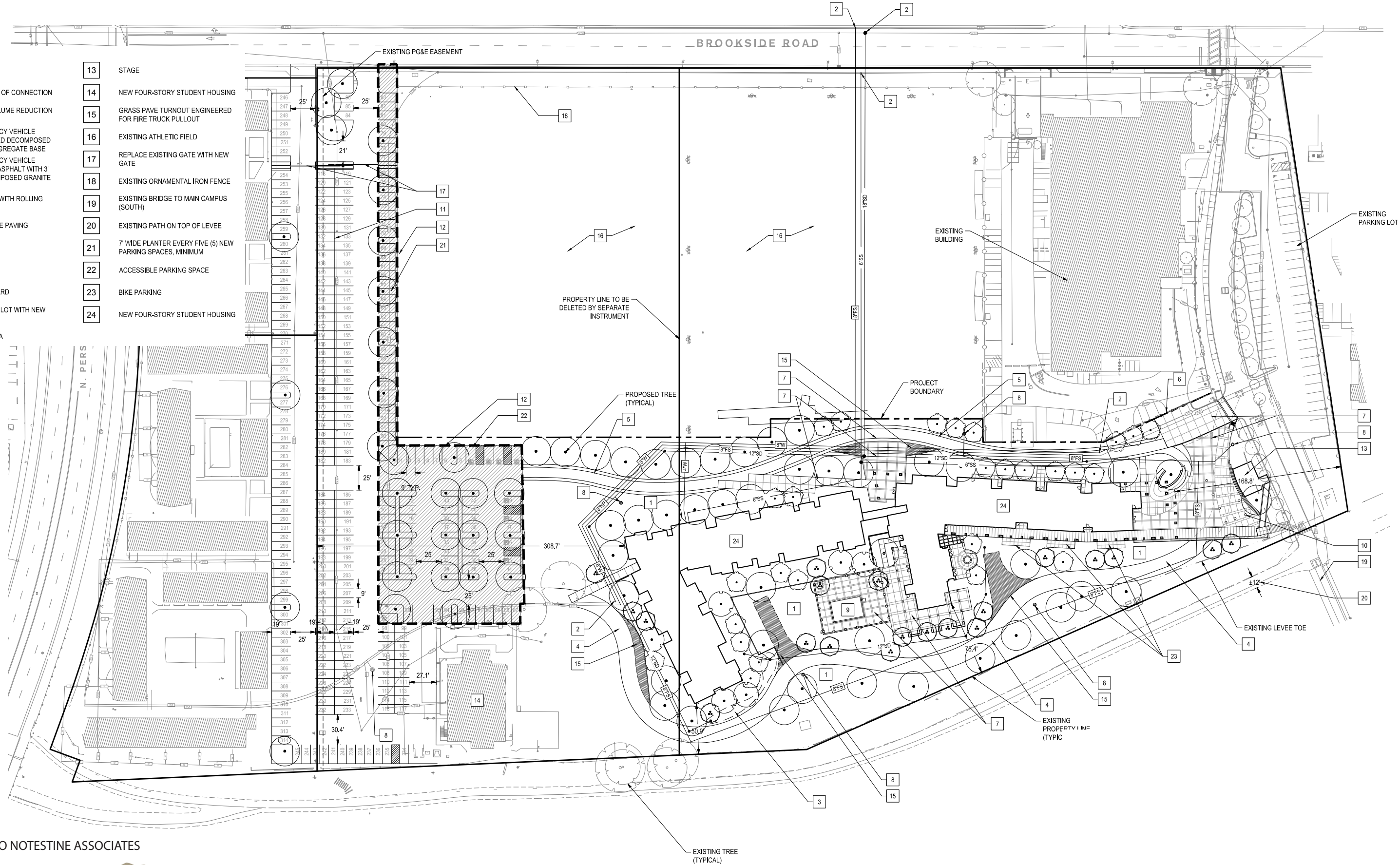
EXISTING PATH ON TOP OF LEVEE
- 21

7' WIDE PLANTER EVERY FIVE (5) NEW PARKING SPACES, MINIMUM
- 22

ACCESSIBLE PARKING SPACE
- 23

BIKE PARKING
- 24

NEW FOUR-STORY STUDENT HOUSING



Source: MOGAVERO NOTESTINE ASSOCIATES



Figure 2-2  
SITE PLAN







① View from pedestrian bridge looking Northwest



② View from levee looking Northeast



③ View of North Entry





- ① U.O.P. BRICK BLEND
- ② CEMENT PLASTER - SAND FINISH
- ③ SMOOTH TROWELED CEMENT PLASTER
- ④ LIMESTONE TILE
- ⑤ VINYL WINDOW
- ⑥ SCUPPER AND DOWNSPOUT



Source: MOGAVERO NOTESTINE ASSOCIATES

Vehicle access to the project would be via the existing gated entry to the nearby University Townhomes from Brookside Road and the existing parking area that presently serves the University Townhomes and Theta Chi fraternity. Emergency vehicle access will extend from the parking area along the north and south sides of the project to existing vehicle access at the foot of the Calaveras River bridge.

The project will generate new student parking demand, which would be met from restriping and additions to the existing University Townhomes and Theta Chi parking area. An additional row of parking will be provided along the east side of the existing parking area, and a new parking area would be developed in the area immediately north of Theta Chi. As a result of these changes, a total of 314 student housing parking spaces will be provided. The project will also require demolition of 47 existing general UOP parking spaces in Lot 13, located south of the UOP Physical Plant building. Student parking demands associated with the project will be met by the proposed reconfiguration of the University Townhomes parking area.

The proposed project will be served by existing City sewer and storm drainage, and Cal Water, facilities adjacent to or near the site. Electrical services will be provided from the existing UOP circuits at the project site; an existing transformer located south of the Calaveras River will need to be upsized to meet project demand. Gas and phone utilities located adjacent to the site will be extended to provide service to the project.

The City of Stockton is preparing to improve the existing wastewater trunk line along Pershing Avenue south of Brookside Road, which conducts wastewater generated in a large area north of the Calaveras River, including the project site, to the City's wastewater treatment facility. This project known as the "Crown and Pershing Sanitary Sewer Crossing at Calaveras River" is listed in the City's Wastewater Capital Improvement Program (CIP) Budget as Sanitary Sewer System Repair project No. 85, which is budgeted for \$2.8 million to be expended before the end of the 2015-2016 fiscal year.

This facility is programmed to be completed ahead of the planned occupancy of the project in Fall 2017 (Stagg, pers. comm.) and will ensure that adequate wastewater collection capacity is available to the project as well as future development in the area served by the line. No other off-site utility improvements are needed to accommodate the project.

## 2.5 Demolition

---

The project site is currently developed with nine UOP tennis courts and an associated clubhouse. These facilities will be demolished as part of the re-development of the site; replacement tennis facilities are presently being constructed in the area south of the Calaveras River. The project would occupy a portion of the Lot 13 parking area, which would involve the demolition of 47 existing parking stalls.

## 2.6 Permits and Approvals

---

The project would require a Planning Commission Use Permit for the development of new "Colleges and universities" facilities, which are allowable uses on land zoned for Residential, Low Density with a Use Permit. The project would also require building permits and be subject to Design Review conducted by the City of Stockton Architectural Review Committee (ARC). The project will not involve any other known permits or approvals.

## 3.0 Environmental Checklist Form

### 3.1 Introduction to Environmental Analysis

---

#### 3.1.1 GENERAL PROJECT INFORMATION

Project Title: University of the Pacific Student Housing Project – Upper Division Experience

Lead Agency Name and Address: City of Stockton  
Community Development Department, Planning Division  
345 North El Dorado Street  
Stockton, CA 95201

Contact Person and Phone Number: Richard Larrouy  
209-937-8266

Project Location: The project site is located on the UOP main campus in the central portion of the City of Stockton in San Joaquin County. The project site is north of the Calaveras River, east of Pershing Avenue, south of Brookside Road, and west of Manchester Avenue. Existing uses on the project site include tennis courts, open space areas and university parking. The site is comprised of portions of Assessor's Parcel Number (APN) 110-260-03 and 110-260-04. The site is shown on the USGS Stockton West, California, 7.5-minute quadrangle map located within Township 2 North, Range 6 East, MDBM.

Project Sponsor Name and Address: University of the Pacific  
3601 North Pacific Avenue  
Stockton, CA 95211  
Chad Izmirian, Senior Vice President  
Capstone Development Partners, LLC  
760-522-1026

General Plan Designation: Institutional

Zoning: Residential, Low Density

Description of Project: The project involves development of 381 student housing beds in 142 studio, two-bedroom and four-bedroom apartment units and related community facilities. See detailed project description in Chapter 2.0.

Surrounding Land Uses and Setting: The project is located on the UOP Stockton campus, adjacent to and north of the Calaveras River. Surrounding land uses include playing fields, other student housing and the UOP Physical Plant. The project site is currently

developed with tennis courts, to be relocated, and parking areas.

Other Public Agencies Whose  
Approval is Required

None

### 3.1.2 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a “Potentially Significant Impact” as indicated by the checklist on the following pages.

	Aesthetics		Agriculture and Forestry Resources	✓	Air Quality
✓	Biological Resources	✓	Cultural Resources		Geology/Soils
	Greenhouse Gas Emissions	✓	Hazards & Hazardous Materials	✓	Hydrology/Water Quality
	Land Use/Planning		Mineral Resources		Noise
	Population/Housing		Public Services		Recreation
	Transportation/Traffic		Utilities/Service Systems	✓	Mandatory Findings of Significance

### 3.1.3 LEAD AGENCY DETERMINATION:

On the basis of this initial evaluation:

I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

- ✓ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

I find that the proposed project MAY have a “potentially significant impact” or “potentially significant unless mitigated” impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been

avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

CITY OF STOCKTON COMMUNITY DEVELOPMENT DEPARTMENT

*Original signed by*

*October 2, 2015*

---

David Kwong, Director

---

Date

### 3.1.4 NOTES RELATED TO EVALUATION OF ENVIRONMENTAL IMPACTS

- 1) A brief explanation is required for all answers except “No Impact” answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A “No Impact” answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A “No Impact” answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
- 2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
- 3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. “Potentially Significant Impact” is appropriate if there is substantial evidence that an effect may be significant. If there are one or more “Potentially Significant Impact” entries when the determination is made, an EIR is required.
- 4) “Negative Declaration: Less Than Significant With Mitigation Incorporated” applies where the incorporation of mitigation measures has reduced an effect from “Potentially Significant Impact” to a “Less Than Significant Impact.” The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from “Earlier Analyses,” as described in (5) below, may be cross-referenced).
- 5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:
  - a) Earlier Analysis Used. Identify and state where they are available for review.
  - b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based



on the earlier analysis.

c) Mitigation Measures. For effects that are “Less than Significant with Mitigation Measures Incorporated,” describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

- 6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
- 7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.
- 8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project’s environmental effects in whatever format is selected. Association of Environmental Professionals 2015 CEQA Guidelines Appendices
- 9) The explanation of each issue should identify:
  - a) the significance criteria or threshold, if any, used to evaluate each question; and
  - b) the mitigation measure identified, if any, to reduce the impact to less than significance

## 3.2 AESTHETICS

---

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?			✓	
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				✓
c) Substantially degrade the existing visual character or quality of the site and its surroundings?			✓	
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?			✓	

## **NARRATIVE DISCUSSION**

### **Environmental Setting**

The proposed project is located on the existing UOP Stockton campus in the central portion of the City Stockton. The overall aesthetic environment of the UOP area is entirely urban. The campus is bounded by major arterial streets on the east and west. Surrounding land uses are primarily residential in nature but include university-related and other institutional uses. North of the campus, land use transitions from residential to major retail and other commercial development along March Lane and Pacific Avenue. Additional commercial development is located along Pacific Avenue south of the campus.

The project site is located immediately north of the Calaveras River adjacent to the UOP Physical Plant and the athletic and recreational open space provided by the Klein Fields. Other UOP land uses north of the River include the University Townhomes, Theta Chi and Monagan/Chan student residential facilities as well as the School of Dentistry, student health and police facilities. The western portion of the site makes up the existing UOP tennis complex, which is being replaced by a new facility located south of the River. The eastern portion of the site is a university parking facility known as Lot 13.

The site is physically and visually separated from the UOP main campus by the Calaveras River levee system. The areas north and south of the river are connected by a bicycle and pedestrian bridge. Views over both portions of the campus as well as surrounding land uses north of the campus are available from the bridge and the levee-top bikeway. Views from the project site itself are confined primarily to on-campus facilities. Prominent features in the project site viewshed include the levees to the south, the Physical Plant facilities, Lot 13 and the bridge approach ramp to the east, the Klein Fields and landscaping trees along the north boundary of the fields to the north, and the University Townhomes and Theta Chi residences and associated parking areas to the west. Existing residential areas north of Brookside Road are visible from the site at ground level but are screened by landscaping trees.

Public views of the site are available from the public Class 1 bicycle and pedestrian way along the top of the Calaveras River levee and from Brookside Road to the north. These existing views are illustrated in the “before” photos on Figures 3-1 and 3-2. These views include the Calaveras River levees and the various on-campus improvements discussed above, including the playing fields, University Townhomes and Theta Chi residences, the Physical Plant facilities and nearby parking areas. An electrical transmission line runs along the northern toe of the levee adjacent to the project. From the levee, the existing uses of the project site are prominent foreground features, and from this high point views are available over the campus and surrounding urban land uses. This northern view is not an identified “scenic vista,” but the bicycle/pedestrian way has substantial values as a recreational and travel corridor for UOP and the City.

From Brookside Road, views of the project site are partially obscured by existing landscaping trees along the north line of Klein Fields; from this vantage point, the fencing and lighting facilities of the tennis courts are visible, but otherwise the site is indistinguishable from the surrounding buildings, levee and fields.

There are no identified scenic vistas, scenic resources or designated scenic roads or highways in the project vicinity. The “park-like” UOP campus, including buildings, landscaping and other on-campus development, represents a scenic resource for surrounding areas and the City of Stockton as a whole.

Consistent with its urban location, the UOP campus, the project site and the general vicinity include substantial night lighting. Principal lighting features in the project vicinity include street lighting along the surrounding streets, safety and security lighting along bicycle/pedestrian ways, parking lot illumination and security lighting of buildings and adjacent outdoor areas. The eastern playing field is lighted and operates approximately five days a week from approximately 7:00 pm to midnight depending on athletic schedules and approval by UOP. The tennis courts that make up a portion of the site are lighted for night use. Additional night illumination in the general project vicinity is provided by household and parking lot security lighting.

## **Environmental Impacts and Mitigation Measures**

a) **Scenic Vistas.** The project would have no effect on scenic vistas. There are no identified scenic vistas located on or in the vicinity of the site.

The project would involve construction of a four-story student residential building. The primary sections of the building will be located roughly parallel to the Calaveras River levee; two wings of the building will be perpendicular to the levee; the building is approximately 70 feet north of the existing Class 1 bicycle and pedestrian path along the top of the levee. Figure 3-2 provides an illustration of the effect of project development on views from the UOP bridge, and the levee top, which is at approximately the same elevation. The proposed building would partially obscure the line of sight to the north along an approximately 800-foot section of the bikeway. This northern view is not an identified “scenic vista,” but has substantial recreational and travel values. The project would affect views along this corridor, but as these views are not of identified significance, and therefore the project’s effect is considered to be less than significant.

The project would add a prominent new feature to southern views from the Brookside Road corridor. These views are partially screened by existing landscaping trees along the north line of the Klein Fields. These potential future views are represented by the “after” view shown on Figure 3-1; however, the view illustrated is from the northern portion of the Klein Fields rather than Brookside Road and eliminate the effect of the screening trees. The student housing building silhouette from this vantage would extend above the Calaveras River levee and obscure views of the levee, which in turn obscures views of the UOP campus to the south. The proposed building would not obstruct views of any identified scenic resources, and therefore the project would involve a less than significant effect on views from this location.

b) **Scenic Resources.** The project would have no effect on scenic resources. There are no identified scenic resources located on or in the vicinity of the site. The project site is made up of existing tennis courts and parking areas that do not constitute scenic resources. There are no scenic highways or roads located in the vicinity of the site.

c) **Visual Character and Quality.**

The proposed project would alter the makeup of improvements on the project site and its existing visual character. These changes would result from the removal of the existing tennis courts and Lot 13 parking area followed by the addition of the four-story student housing buildings, site improvements and landscaping of the building area and the restriping and expansion of the existing University Townhomes and Theta Chi parking lot (Figures 2-1 and 2-2).



① North View Before



② North View After

Source: MOGAVERO NOTESTINE ASSOCIATES



Figure 3-1  
VISUAL SIMULATION #1 LOOKING  
SOUTH FROM BROOKSIDE ROAD





3 Bridge View Before



4 Bridge View After

Source: MOGAVERO NOTESTINE ASSOCIATES

Replacement of the existing site uses with the project would result in a net beneficial effect on the visual character and quality of the project. The project would add to the variety and aesthetic interest provided by site improvements. Proposed improvements will be architect-designed to be consistent with the existing architectural and design environment of the UOP campus. In addition, the improvements would be subject to City of Stockton design review process. Project design and design review will ensure the aesthetic quality of the proposed improvements, which can be expected to result in a beneficial effect on visual/aesthetic quality in the project area.

d) Light and Glare. The project will result in a reduction in overall night lighting at the project site and in the vicinity. Existing high-intensity tennis court lighting and Lot 13 parking lighting will be removed. Night lighting of the project will include lower-intensity safety and security lighting of outdoor use areas and pedestrian circulation. New night lighting within the project would be oriented internally and would not result in a substantial off-site effect, including spill light or glare impacts on surrounding properties. Proposed lighting would be consistent with other UOP lighting in the vicinity. The project will not involve significant light or glare impacts.

Existing night lighting of the Klein Field will be accounted for in the design of the proposed facilities and would not involve a significant effect on the proposed project.

### 3.3 AGRICULTURE AND FORESTRY RESOURCES

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				✓
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				✓
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?				✓
d) Result in the loss of forest land or conversion of forest land to non-forest use?				✓
e) Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?				✓

## NARRATIVE DISCUSSION

### Environmental Setting

The project site is entirely developed in urban use, specifically as existing UOP tennis courts and a parking lot. The site is surrounded by other elements of the UOP campus. There is no agricultural activity on or near the project site.

The State's Important Farmland Map for the San Joaquin County (1998) indicates that the project site is considered "Urban and Built Up Land." The lands surrounding the project site are also mapped by the State as being in the "Urban and Built Up Lands" category. The proposed site is designated Institutional by the Stockton General Plan and zoned for low-density residential development (RL) by the City of Stockton.

There are no Williamson Act contracts on the proposed project site. There is no forest land or forestry activity occurring on or in the vicinity of the project site.

### Environmental Impacts and Mitigation Measures

a) Agricultural Land Conversion. The project would develop new student housing on existing developed land. The project would not convert agricultural land or land mapped as having agricultural value of any sort to non-agricultural use. The proposed project is mapped by the State of California as "Urban and Built Up Land," is designated by the City of Stockton for urban use, and is currently developed with urban uses.

b) Zoning and Williamson Act. The project site is designated for urban use and zoned for low-density residential use by the City of Stockton. The project would not conflict with any zoning for agricultural land. There are no Williamson Act contracts on or in the vicinity of the project site.

c, d, e) Timberland Conversion and Zoning. There are no timber lands, lands zoned for timber production, timber operations or other forest lands on, adjacent to, or in the vicinity of the project site, and, therefore, development of the project would result in no impact on forestry resources.

The project would have no other conceivable impact on agricultural or forest resources are considered less than significant. There are no agricultural land or forestlands on, adjacent to, or anywhere in the vicinity of the project site.

## 3.4 AIR QUALITY

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable Air Quality Attainment Plan?				✓
b) Violate any air quality standard or contribute to an existing or projected air quality violation?		✓		

c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

d) Expose sensitive receptors to substantial pollutant concentrations?

e) Create objectionable odors affecting a substantial number of people?

	✓		
	✓		
		✓	

## NARRATIVE DISCUSSION

### Environmental Setting

The project site is located in the City of Stockton in the northern portion of the San Joaquin Valley, which comprises the San Joaquin Valley Air Basin. The San Joaquin Valley Air Pollution Control District (SJVAPCD) has jurisdiction over most air quality matters in the Air Basin; the SJVAPCD is composed of San Joaquin, Stanislaus, Merced, Madera, Fresno, Kings and Tulare Counties, and the Central Valley portion of Kern County. The SJVAPCD is tasked with implementing programs and regulations needed to comply with the federal and state Clean Air Acts.

The prevailing winds in the project area are from the north/northwest towards the south/southeast. Summers are hot and dry, and winters are cool with frequent periods of fog. Average daily temperatures range from 45.3 degrees Fahrenheit (°F) in January to 94.6°F in July. Maximum temperatures of 90°F or greater occur about 81 days per year. Temperatures of 32°F or below occur about 22 days per year. Nearly 90% of the annual precipitation falls in the six months between November and April.

Both the State of California and the federal government have established ambient air quality standards (AAQS) for criteria air pollutants. The ambient air quality standards define clean air; the primary standards are established to protect the health of even the most sensitive individuals. Secondary standards set limits to protect public welfare, including protection against decreased visibility, damage to animals, crops, vegetation, and buildings. In addition to the criteria pollutants, the California Air Resources Board also identifies other air pollutants as toxic air contaminants (TACs) - pollutants that may cause serious, long-term effects, such as cancer, even at low levels.

The San Joaquin Valley Air Basin is designated “non-attainment” for ozone; that is, AAQS standards for ozone are exceeded periodically. Ozone is not emitted directly into the air, but is formed by a photochemical reaction in the atmosphere. Ozone precursors, which include reactive organic gases (ROG) and nitrogen oxides (NOx), react in the atmosphere in the presence of sunlight to form ozone. Because photochemical reaction rates depend on the intensity of ultraviolet light and air temperature, ozone is primarily a summer air pollution problem. Ozone is a respiratory irritant and an oxidant that increases susceptibility to respiratory infections and can cause substantial damage to vegetation and other materials.

The Air Basin is also designated “non-attainment” for respirable particulate matter, because concentrations of these pollutants sometimes exceed the AAQS. Health concerns associated with



suspended particulate matter focus on those particles small enough to reach the lungs when inhaled. Few particles larger than 10 microns in diameter reach the lungs. Consequently, both the federal and state air quality standards for particulate matter apply to particulate matter 10 microns or less in diameter (PM<sub>10</sub>) as well as to particles less than 2.5 microns in diameter (PM<sub>2.5</sub>), which are carried deeper into the lungs. PM conditions in San Joaquin County are a result of a mix of rural and urban sources, including agricultural activities, vehicle exhaust, industrial emissions, dust suspended by vehicle traffic, and secondary aerosols formed by reactions in the atmosphere.

Carbon monoxide (CO) is managed as a local pollutant of concern; areas with high traffic congestion may be subject to carbon monoxide levels in excess of AAQS. Motor vehicles are the dominant source of CO emissions in most areas. High CO levels develop primarily during winter when periods of light winds combine with the formation of ground level temperature inversions (typically from the evening through early morning), which reduce dispersion of vehicle emissions, including CO. Motor vehicles also exhibit increased CO emission rates at low air temperatures. High CO concentrations occur in areas of limited geographic size, which are sometimes referred to as “CO hot spots.”

Air toxics are "toxic air contaminants" (TACs), which are defined by California Health and Safety Code Section 39655 as “air pollutant(s) which may cause or contribute to an increase in mortality or in serious illness, or which may pose a present or potential hazard to human health.” Air toxics include diesel particulate emissions from trucks, railroads, shipping and stationary diesel combustion sources; diesel particulate is identified as a TAC under the State programs. According to the CARB, diesel particulate constitutes approximately 70% of the statewide air toxic health risk. The CARB’s *Air Quality and Land Use Handbook* addresses air toxic risk with recommendations for siting air-pollutant-sensitive land uses. The Handbook identifies major potential TAC sources including freeways, distribution centers, rail yards, ports, refineries, chrome plating facilities, dry cleaners and gas stations. For example, projects within 500 feet of freeways have the potential to be exposed to significant health risk from diesel particulate emissions and should be subject to health risk screening or modeling before approval. The project site is not located near a freeway or any other major source of diesel particulates.

The air basin is designated as an extreme ozone nonattainment area for federal 2008 8-hour ozone standard and nonattainment for PM<sub>2.5</sub>. Plans addressing these conditions to the degree feasible have been adopted by the SJVAPCD. The air basin is attainment/maintenance for PM<sub>10</sub>, and a Maintenance Plan has been adopted for PM<sub>10</sub>. The Stockton area is in attainment of carbon monoxide standards, and subject to a maintenance plan adopted by the USEPA. Attainment and maintenance plans are implemented by enforcement of existing SJVAPCD regulations and rules.

The SJVAPCD has jurisdiction over most air quality matters in the Air Basin and implements the federal and California Clean Air Acts, and the applicable attainment and maintenance plans, through local regulations. The SJVAPCD regulations that would be applicable to the project are summarized below.

#### *Regulation VIII (Fugitive Dust PM<sub>10</sub> Prohibitions)*

Rules 8011-8081 are designed to reduce PM<sub>10</sub> emissions (predominantly dust/dirt) generated by human activity, including construction and demolition activities, road construction, bulk materials storage, paved and unpaved roads, carryout and track out, landfill operations, etc.

#### *Rule 4101 (Visible Emissions)*

This rule prohibits emissions of visible air contaminants to the atmosphere and applies to any source operation that emits or may emit air contaminants.

#### *Rule 9510 (Indirect Source Review)*

Rule 9510, also known as the Indirect Source Rule (ISR), is intended to reduce or mitigate emissions of NO<sub>x</sub> and PM<sub>10</sub> from new development in the SJVAPCD including construction and operational emissions. This rule requires specific percentage reductions in estimated "on-site" construction and operation emissions, and/or payment of off-site mitigation fees for required reductions that cannot be met on the project site. The rule applies to development projects of 50 residential units and larger. Based on this criteria, the project would be subject to Rule 9510.

## **Environmental Impacts and Mitigation Measures**

The SJVAPCD has adopted the 2015 revision of its *Guide for Assessing and Mitigating Air Quality Impacts* (GAMAQI). GAMAQI defines analysis methodology, thresholds of significance, and mitigation measures for the assessment of air quality impact under CEQA, which was used in the analysis of the project. GAMAQI describes a three-tier framework for analysis depending on project size. Based on GAMAQI criteria, the proposed project is evaluated at the Cursory Analysis Level. GAMAQI defines significance thresholds for ROG, NO<sub>x</sub> and other emissions as described in Table 3-1; ROG and NO<sub>x</sub>, which contribute to the formation of ozone, are significant if they exceed 10 tons per year. For PM<sub>10</sub> and PM 2.5, the threshold is 15 tons per year.

The potential air emissions associated with the project were modeled by KD Anderson using the CalEEMod computer model. Estimated air emissions for project construction and operation are shown in Table 3-1. The CalEEMod analysis for project operations included consideration of emissions from on-site sources such as natural gas-fired space and water heaters, as well as vehicle trips generated by the project. The analysis used default emission factors and other values contained in CalEEMod; however, land use figures were adjusted to be consistent with the proposed project and trip generation figures developed in the traffic study, as discussed in Section 17, and shown in Appendix G. The CalEEMod results are shown in Appendix A of this document. Annual emissions estimated at completion and occupancy of the proposed project, assumed to occur in the Fall 2017, are shown in Table 3-1.

TABLE 3-1  
PREDICTED AIR POLLUTANT EMISSIONS\*  
COMPARISON TO SJVAPCD SIGNIFICANCE THRESHOLDS

<u>Highest Annual Construction Emissions</u>				<u>Annual Operation Emissions</u>		
	SJVAPCD Significance Threshold	Project Emissions	Exceeds Threshold	SJVAPCD Significance Threshold	Project Emissions	Exceeds Threshold
CO	100	2.4	No	100	8.4	No
NO <sub>x</sub>	10	2.7	No	10	2.3	No

ROG	10	0.71	No	10	1.7	No
SOx	27	0.0038	No	27	0.016	No
PM10	15	0.42	No	15	1.0	No
PM2.5	15	0.27	No	15	0.30	No

Notes:

Sources: California Emissions Estimator Model v. 2013.2.2, Guide for Assessing and Mitigating Air Quality Impacts, SJVAPCD, 2015

a) Air Quality Plan Consistency. As discussed in the following sections, the project is required to comply with existing SJVAPCD regulations and rules and will thereby involve no conflict with adopted air quality attainment and maintenance plans. The project would have no effect in this issue area.

b, d) Construction Emissions. Construction emissions have the potential to affect sensitive receptors, such as residences, near the site. Construction emissions are temporary, and would cease when construction work is completed. The nearest sensitive receptors are the Theta Chi fraternity house and University Townhouses, located to the west of the project site. Single-family residences and other on-campus housing are located north of Brookside Road, and the UOP main campus is located immediately south of the Calaveras River. All of these residences and other facilities could be affected by dust emissions from project construction. This is a potentially significant effect.

The SJVAPCD Regulation VIII and associated rules require construction projects to implement dust control measures specified in the associated rules. Implementation of required dust control measures would further reduce potential for dust emissions – already estimated to be less than significant based on CalEEMod modeling. SJVAPCD Regulation VIII Fugitive Dust Rules are “Required Mitigation Measures,” as listed below.

Level of Significance: Potentially Significant

Required Mitigation Measures:

AIR-1: The project shall comply with all applicable requirements of SJVAPCD Regulation VIII, including the following:

- a) Air emissions related to the project shall be limited to 20% opacity (opaqueness, lack of transparency) or less, as defined in SJVAPCD Rule 8011. The dust control measures specified below shall be applied as required to maintain the Visible Dust Emissions standard.
- b) The contractor shall pre-water all land clearing, grubbing, scraping, excavation, land leveling, grading, cut and fill, and phase earthmoving.
- c) The contractor shall apply water, chemical/organic stabilizer/suppressant, or vegetative ground cover to all disturbed areas, including unpaved roads, throughout the period of soil disturbance.

d) The contractor shall restrict vehicular access to the disturbance area during periods of inactivity.

e) The contractor shall apply water or chemical/organic stabilizers/suppressants, construct wind barriers and/or cover exposed potentially dust-generating materials.

f) When materials are transported off-site, the contractor shall stabilize and cover all materials to be transported and maintain six inches of freeboard space from the top of the container.

g) The contractor shall remove carryout and trackout of soil materials on a daily basis unless it extends more than 50 feet from site; carryout and trackout extending more than 50 feet from the site shall be removed immediately. The use of dry rotary brushes is expressly prohibited except where preceded or accompanied by sufficient wetting to limit the visible dust emissions. Use of blower devices is expressly forbidden. If the project would involve more than 150 construction vehicle trips per day onto the public street, additional restrictions specified in Section 5.8 of SJVAPCD Rule 8041 will apply.

As with operational emissions, project construction activities are also subject to ISR requirements. For project construction equipment greater than 50 horsepower, emissions of NO<sub>x</sub> must be reduced by 20%, and PM exhaust emissions must be reduced by 45%. To fulfill the requirements of the ISR, the ODS needs to demonstrate that emissions would be reduced through “on-site” mitigation, or pay a fee to the SJVAPCD for any required emission reductions that have not been accomplished through project mitigation commitments. Compliance with the ISR, as required by existing regulations, will further reduce potential construction emission impacts, already determined to be less than significant.

Level of Significance: Potentially significant

Required Mitigation Measures:

AIR-2: The project shall comply with applicable requirements of SJVAPCD Rule 9510, including provision of on-site construction mitigation measures, or payment of ISR fees.

c) Regional Criteria Pollutant Emissions. The estimated pollutant emissions from the project fall well below (in all cases less than 10% of) the SJVAPCD significance thresholds; no significance threshold is exceeded. As a result, the project would have a less than significant effect on emissions of criteria pollutants and on regional air quality. Mitigation measures are not required.

The project appears to be subject to Rule 9510 (ISR) requirements, as the project size would exceed ISR permit thresholds. Under Rule 9510, operational emissions of NO<sub>x</sub> must be reduced by 33.3%, and operational emissions of PM must be reduced by 50%. To fulfill the requirements of the ISR, the ODS needs to demonstrate that emissions would be reduced through “on-site” mitigation, or pay a fee to the SJVAPCD for any required reductions that have not been accomplished through project mitigation commitments. ISR fees are indexed to the cost of providing offsetting mitigation and are used for that purpose. Compliance with the ISR would further reduce the project’s NO<sub>x</sub> and PM operational emission impacts, which have been determined to be less than significant based on comparison of CalEEMod modeling results to SJVAPCD thresholds. Project operations activities will be subject to SJVAPCD rules identified above, which are Required Mitigation Measures. No additional mitigation measures are required for operations emissions.

c) Cumulative Emissions, Project Construction. Project construction would involve grading and excavation of the project site, potential for dust generation, and exhaust emissions from construction equipment. Construction emissions were also estimated using CalEEMod for five construction phases: demolition, grading, paving, building construction, and architectural coating. Construction activities were assumed to occur over a period of approximately 18 months in 2016-2017. Total estimated construction emissions associated with the proposed project, by phases, are detailed in Appendix A and summarized in Table 3-1 above.

The estimated emissions from project construction fall well below (in most cases not exceeding 10% of) the SJVAPCD significance thresholds. As a result, the project would have a less than significant effect on construction emissions. Project construction activities will be subject to SJVAPCD construction emission regulations and rules identified above as Required Mitigation Measures. No additional mitigation measures are not required for construction emissions.

c) Carbon Monoxide Emissions. Concerns with carbon monoxide (CO) are related traffic congestion at street intersections. Congestion results in prolonged idle times and localized increases in carbon monoxide emissions that can exceed air quality standards at nearby receptors. Under GAMAQI, a project may be considered to have a potentially significant impact related to CO if it meets one of the following conditions:

A traffic study for the project indicates that the Level of Service (LOS) on one or more streets or at one or more intersections in the project vicinity will be reduced to LOS E or F.

A traffic study indicates that the project will substantially worsen an already existing LOS F on one or more streets or at one or more intersections in the project vicinity.

As described in Section 17 Traffic/Transportation, the North Pershing Avenue/Brookside Road intersection is the most congested in the project area, is sensitive to project-generated traffic and is in close proximity to residential areas. Based on traffic modeling, however, the project will not result in reduction in LOS at this location to and will not substantially worsen existing congestion at the intersection. GAMAQI also indicates that residential housing projects that generate fewer than 1,453 trips per day would not have significant impacts on air quality, including CO emissions. The project would generate less than 1,000 trips per day and, from the GAMAQI perspective, would involve less than significant CO impacts.

c) Air Toxics Impacts. Diesel particulate is the primary TAC of concern in the project area. Diesel particulate matter emissions are a health concern only if sensitive receptors have substantial and long-term (i.e. 70 year) exposure. Project construction would generate temporary diesel particulate emissions in the project area. However, PM exhaust emissions from construction, which include diesel particulate matter, are well below the GAMAQI PM significance thresholds. Diesel particulate emissions will be temporary, for no longer than the 18-month construction period, after which such emissions would cease. Therefore, the project would not involve a substantial or lengthy exposure to diesel particulate, and project construction would have a less than significant air toxic effect.

Project operations would not generate any significant emissions of air toxics. The project involves residential and related uses, which do not have known air toxic emissions.

As described in the Environmental Setting, the project site is not located near any major sources of diesel particulate matter, such as freeways, so future residents of the site would not be exposed

to known air toxic emissions. The project would have a less than significant effect in this issue area.

e) Odor Impacts. The project site is not exposed to any known substantial odor sources. The project would not generate odors that could affect surrounding land uses. The project would have no effect in this issue area.

### 3.5 BIOLOGICAL RESOURCES

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Adversely impact, either directly or through habitat modifications, any endangered, rare, or threatened species, as listed in Title 14 of the California Code of Regulations (Sections 670.2 or 670.5) or in Title 50, Code of Federal Regulations (Sections 17.11 or 17.12)?		✓		
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?				✓
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?				✓
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?				✓
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				✓
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state habitat conservation plan?				✓

## **NARRATIVE DISCUSSION**

### **Environmental Setting**

The project is located in central Stockton, a fully-urbanized area, and project site is 100% developed; the site consists of UOP's existing tennis complex and a parking lot. The project site is adjacent to the Calaveras River levee and bike path, which bisects the UOP campus. The project site is separated from the area within the Calaveras River levees, which includes the Calaveras River channel and floodway areas populated with wetlands and riparian vegetation.

A biological inventory of the project site was prepared by Moore Biological Consultants (Moore, 2015) in conjunction with preparation of this Initial Study. The inventory included a review of the California Natural Diversity (biological resource) Data Base (CNDDB), a field survey of the project, consideration of potential biological effects of the project and recommendations for avoiding or minimize those effects. The inventory results are shown in Appendix B.

Moore found that the entire survey area is developed, natural habitats having been replaced by pavement, turf or landscaping. The only trees in the inventory area are a few coastal oaks in the vicinity of the Theta Chi house and ornamental trees in the parking lots. The Stockton Development Code includes protection for "heritage trees," oak trees greater than 16 inches in diameter; Stockton Development Code §16.130 requires that an oak tree removal permit be obtained and replacement mitigation provided if heritage trees must be removed.

No blue elderberry shrubs, habitat for the Valley elderberry longhorn beetle, were observed. The site does not contain any potentially jurisdictional wetlands, Waters of the U.S. or, other than potential nesting trees, habitat for special-status plants or wildlife. Suisun marsh aster, a special-status plant, has been reported in the Calaveras River near the site, but suitable habitat for this species does not exist on the site.

Several special-status species have been recorded in the general project vicinity. These include Swainson's hawk, burrowing owl, tricolored blackbird, white-tailed kite, least Bell's vireo and other migratory bird species that could potentially nest in the project area. A number of other species, including giant garter snake, California tiger salamander, Central Valley steelhead, delta smelt, longfin smelt and vernal pool tadpole, are aquatic species associated with streams and wetlands, which do not occur on the project site; the Calaveras River levee separates the site from potential habitat for these species.

The proposed project site does not provide any other native vegetation or wildlife habitat other than habitat for species commonly associated with urban development. The project site is located in the coverage area of the San Joaquin County Multi-Species Open Space and Habitat Conservation Plan (SJMSCP); provided that a project obtains coverage under the SJMSCP and complies with Incidental Take Minimization Measures (ITMMs) prescribed under the SJMSCP, it's potential effects on special-status species is considered less than significant. The site is within SJMSCP Category A: No Pay Zone; projects in Zone A may obtain SJMSCP coverage without paying fees.

### **Environmental Impacts and Mitigation Measures**

a) Effects on Special-Status Species. The project would not involve any direct effects on special-status species or their habitat; there are no know special-status species occurrences or habitat located on or adjacent to the project site. The project would have no effect on aquatic species potentially occurring within the Calaveras River levees, including giant garter snake, California

tiger salamander, Central Valley steelhead, delta smelt, longfin smelt and vernal pool tadpole. The Calaveras River levee separates the site from potential habitat for these species; no portion of the project would involve physical effects on these levees.

Project construction has the potential to affect nesting by special-status bird species that may occur in the project vicinity if construction if these species nest on or near the site, and construction occurs during the nesting season for these species. Potentially-affected species include Swainson's hawk, burrowing owl, tricolored blackbird, white-tailed kite and least Bell's vireo. If construction will occur during the nesting season, pre-construction surveys for nesting activity and prescription of protection measures are needed to avoid significant nesting effects. These requirements or their equivalent will be required of the project in SJMSCP ITMMs, as described in Required Mitigation Measures below, would reduce potential special-status species effects to a less than significant level.

Level of Significance: Potentially significant

Required Mitigation Measures

BIO-1: The ODS shall mitigate for the proportionate loss of potential wildlife habitat from the project site by applying for coverage and implementing Incidental Take Minimization Measures (ITMMs) as required by the adopted San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP).

Significance After Mitigation: Less than significant

b) Riparian and Other Sensitive Habitats. There are no riparian habitats or sensitive natural communities identified in federal, state, regional or local plans, policies or regulations on or adjacent to the project. The project would have no effect in this issue area.

c) Wetlands. There are no federally-protected or other wetlands or waters located on or adjacent to the project. The project would have no effect in this issue area.

d) Fish and Wildlife Movement. The project site is not located in or adjacent to a migration area for any species; the project would no effect on fish or wildlife migration.

e) Local Biological Requirements. The Stockton Development Code includes protections for oak trees, including protection from damage and a requirement that a tree removal permit be obtained and replacement mitigation provided if oak trees must be removed. The project will involve circulation and parking improvements in the vicinity of existing oak trees near the Theta Chi house. The project will not involve removal of these trees. The project would have no effect on oak trees. In the event that oak trees are not avoidable and are of "heritage" size, the project would need to comply with Stockton Development Code §16.130.

f) Conflict with Habitat Conservation Plans. The project is located in the coverage area of the SJMSCP. The City requires development projects to comply with SJMSCP requirements, as reflected in mitigation measures described in subsection "a" above. As a result, the project would not involve any conflict with the SJMSCP; no other adopted conservation plan applies to the project site.



## 3.6 CULTURAL RESOURCES

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?		✓		
b) Cause a substantial adverse change in the significance of a unique archaeological resource (i.e., an artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it contains information needed to answer important scientific research questions, has a special and particular quality such as being the oldest or best available example of its type, or is directly associated with a scientifically recognized important prehistoric or historic event or person)?		✓		
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?		✓		
d) Disturb any human remains, including those interred outside of formal cemeteries?		✓		

## NARRATIVE DISCUSSION

### Environmental Setting

The project site is located adjacent to the north levee of the Calaveras River, opposite the main UOP campus, between the UOP River Bridge and Pershing Avenue in central Stockton. Over time, the Calaveras River has been altered from its natural meandering form; it is now channelized and contained within levees that physically separate the site from the river.

Due to its proximity to the River, the project site is situated overall within lands of high sensitivity with respect to both prehistoric and historic-period sites and features. Lands within the site have been subjected to moderate to substantial disturbance of the ground surface and subsurface from past development. Existing development of the project site consists of tennis courts and a parking lot. Due to previous site disturbance, the archaeological integrity of the site as a whole is considered weak.

### Prehistoric Background

The project area contains lands ranging from low to high in archaeological sensitivity. In part, the range in sensitivity is due to the history of ranching and farming use over the past 100 years, with more intensive mechanized agriculture in more recent times. The adjacent Calaveras River has provided an important source of surface water over time, but this feature is now completely

channelized within an existing levee system and has only limited water supply functions. Nonetheless, areas adjacent to natural streams are always considered archaeologically sensitive, because associated levees and terraces along such features were often utilized for habitation by prehistoric peoples. As well, plant and animal resources important in prehistoric and early historic economies were concentrated along these streams.

The project site is located within territory claimed by the Penutian-speaking Northern Valley Yokuts. Yokuts villages were frequently located on elevated features adjoining streams (e.g., natural levees, knolls, ridges) and were inhabited seasonally. Villages typically consisted of a scattering of small structures; larger villages might also contain an earthen lodge. As with most California Indian groups, economic life for the Yokuts revolved around hunting, fishing and the collecting of plant foods. The collection and processing of these various food resources were accomplished with the use of a wide variety of wooden, bone and stone artifacts. Only fragmentary evidence of their material culture remains, however, due in part to perishability and in part to the impacts of intensive agricultural use on these resources.

The regional prehistory and ethnography provides insight into the types of Native American sites that have been documented within the region generally. These include:

- Village sites located along the margins of streams, particularly at confluences, and at or near other natural surface water sources (springs, marshes, sloughs and other wetlands) and on naturally elevated ground.

- Surface scatters of lithic and/or ceramic artifacts without buried cultural deposits, resulting from short-term occupation and/or specialized economic activities.

- Petroglyphs, usually on boulders, at or close to village sites or encampments and where bedrock is exposed.

- Bedrock food-processing (milling) stations, where suitable bedrock is exposed.

- Trails.

- Mortuary sites, often but not exclusively associated with large village complexes.

- Isolated finds of aboriginal artifacts and flakes.

None of these site types have been documented within the immediate vicinity of the project area. Rather, these represent the range of site types that are considered potentially present within the project area.

## Historic Background

Historically, early Spanish expeditions arrived from Bay Area missions as early as 1804, penetrating the northwestern San Joaquin Valley. By the mid-1820s, hundreds of fur trappers were annually traversing the valley on behalf of the Hudson Bay Company. By the late 1830s and early 1840s, several small permanent European-American settlements had emerged in the Central Valley and adjacent foothill lands, including ranchos in the interior Coast Range. One local Spanish land grant area was known as El Rancho del Campo de los Franceses, which encompassed most of the Stockton area. The project site is located within the boundaries of the original land grant.

With the discovery of gold in the Sierra Nevada, large numbers of European-Americans, Hispanics and Chinese arrived in and traveled through the general project area. Demand for commodities led quickly to the expansion of ranching and agriculture, and permanent communities developed, particularly along major transportation corridors. Of particular importance was the transformation brought about by construction of railroad lines.

Intensive agricultural and urban development soon followed initial railroad construction. By the end of the 19th century, a substantial portion of the Central Valley was being intensively cultivated, including the project site, with increasing mechanization occurring through the 20th century and very substantial expansion of cultivated acreage accompanying arrival of water from the Central Valley Project (CVP).

Historic overviews for the region document the presence of a wide range of historic site and feature types and complexes throughout the area generally. Relevant types include:

- Two-track trails/wagon roads, most or all of which are now paved or no longer exist.

- Water distribution systems, including small and large ditch, canal and channel systems, and constructed or enhanced levee systems.

- Occupation sites and homesteads with associated features such as refuse disposal sites, privy pits, barns, and sheds.

- Commercial structures and features.

- Refuse disposal site(s) associated with historic communities.

- Ranch features, including standing structures, and structural remnants.

As with prehistoric sites, it was not considered likely that most of these were present within the project area, but rather that these represent the range of site types considered potentially present within the project area or surrounding lands.

## Previous Archaeological Survey

The proposed project site was subjected to a pedestrian archaeological survey by Jensen, (Genesis Society) in 2011. This previous survey included all of the present project site. The survey report concluded that no evidence of prehistoric use or presence was observed and no historic-era sites were observed. A copy of the survey report is available for review by qualified persons at the Stockton Community Development Department, 345 N El Dorado Street.

## 2015 Record Search Results

Genesis Society conducted an updated (2015) examination of official San Joaquin County archaeological records housed at the Central California Information Center. The records included the archaeologist pedestrian survey of the project site in 2011. The search also revealed that a number of cultural resource investigations had been conducted on lands near the present project site, mainly in a context of levee maintenance and improvement projects. No prehistoric or historic-era sites have been recorded within the project site. A copy of the 2015 record search is shown in Appendix C.

CCIC records document the following conditions that pertain to the potential presence of cultural resources within or adjacent to the project area, including:

The GLO Plat map for T2N/R6E identifies the project area as residing within “Lot No 37 Part of the Rancho Campo de los Franceses.”

Thompson and West (1979) reference the present project area as within the estate of H. Barnhart.

A bridge, No. 29C-243, is located west of the site, (Pershing Avenue at the Calaveras). Built in 1959, it was evaluated by CALTRANS and is not considered eligible for inclusion on the National Register of Historic Places.

Southwest and opposite the Calaveras River from the project site, two separate locations had previously revealed the presence of prehistoric human burials and associated grave goods.

To date, the Native American Heritage Commission (NAHC) has not indicated the presence of a Sacred Land(s) listing for the project site.

The records search concluded that no prehistoric or historic-era sites were documented for the project site and that no new information has been recorded since the previous (2011) survey and report. A copy of the record search information is available for review by qualified persons at the Stockton Community Development Department, 345 N El Dorado Street.

### **Unique Geology and Paleontological Resources**

Geological materials underlying the site consist of mixed alluvial deposits. There are no unique geological features located on the project site.

Paleontological resources are fossils or groups of fossils that are unique, unusual, rare, uncommon or important, and those that add to an existing body of knowledge in specific areas. Surface examination of a study or project area often does not reveal whether paleontological resources are present. Most of the Stockton area is located on the lower terraces of the San Joaquin River just east of the Delta; the Quaternary lake and marsh deposits that make up these deposits have the potential for fossils to occur but occurrences, if any, are likely to be encountered below the upper five to ten feet of sediment (City of Stockton, 2007). There are no known paleontological resources on the project site.

## **Environmental Impacts and Mitigation Measures**

The project site has been evaluated with a pedestrian survey (2011) and an updated records search (2015); neither effort revealed the presence or potential presence of cultural resources on the project site. This together with past disturbance of the site and the development of existing uses suggests that the project will not result in any direct effect on known archaeological or historic resources. Nonetheless, subsurface cultural resources may exist on the site.

a) Historical Resources. The project site will not affect any known historical resource. No historical resources or potential resources have been identified on the project site. The project will have no known impact in this issue area. Historical archaeological materials not visible to the pedestrian field survey could conceivably be present within the site and be potentially affected by the project; mitigation measures shown below would reduce this potential effect to a less than significant level.

b) Archaeological Resources. The project site will not affect any known pre-historic archaeological resource. No important archaeological resources or potential resources have been

identified on the project site. The project will have no known impact in this issue area. However, archaeological materials not visible to the pedestrian field survey could conceivably be present within the site and be potentially affected by the project; mitigation measures shown below would reduce this potential effect to a less than significant level.

The project will not affect any known Native American sites or resources of concern. However, in order to ensure that the project will not affect Native American resources, UOP will voluntarily consult with Native American representatives for the project area as a part of project planning and construction. The requirement for Native American consultation is included in the mitigation measures listed below.

c) Paleontological Resources. The project site does not contain any known paleontological resources or unique geological features. It is conceivable that deeper excavation associated with the project (that is, exceeding 5-10 feet) could unearth paleontological materials of significance. Mitigation measures below establish a procedure for addressing paleontological discoveries and will reduce potential paleontological effects to a less than significant level.

d) Human Burials. Given the presence of prehistoric burial sites in the project vicinity, the project site was subjected to an intensive pedestrian field survey in 2011 that revealed no physical evidence of burials; however, burials or other cultural materials not visible to the pedestrian field survey may be present within the site. As a result, the project has the potential to result in a significant cultural resources effect; mitigation measures shown below would reduce this potential effect to a less than significant level.

Level of Significance: Potentially significant

Mitigation Measures:

CULT-1: If any subsurface cultural or paleontological resources are encountered during construction of the project, all construction activities in the vicinity of the encounter shall be halted until a qualified archaeologist, or paleontologist as appropriate, can examine these materials, make a determination of their significance and, if significant, recommend further mitigation measures that would reduce potential effects to a less than significant; such measures could include 1) preservation in place or 2) excavation, recovery and curation by qualified professionals. The Stockton CDD shall be notified, and the ODS shall be responsible for retaining qualified professionals, implementing recommended mitigation measures and documenting mitigation efforts in a written report to the CDD, consistent with the requirements of the CEQA Guidelines.

CULT-2: If human remains are encountered at any time during the development of the project, all work in the vicinity of the encounter shall halt, and the County Coroner and the Stockton CDD shall be notified immediately. The Coroner must contact the Native American Heritage Commission if the remains have been identified as being of Native American descent. At the same time, the ODS shall retain a qualified archaeologist to evaluate the archaeological implications of the find and recommend any mitigation measures that may be required under CEQA; the ODS shall implement those recommendations and documenting mitigation efforts in a written report to the CDD.

- CULT-3 In order to ensure that the project will not affect Native American resources, UOP will voluntarily consult with Native American representatives for the project area as a part of project planning and construction.

Significance After Mitigation: Less than significant

### 3.7 GEOLOGY AND SOILS

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.				✓
ii) Strong seismic ground shaking?			✓	
iii) Seismic-related ground failure, including liquefaction?			✓	
iv) Landslides?				✓
b) Result in substantial soil erosion or the loss of topsoil?		✓		
c) Be located on strata or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?			✓	
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code, creating substantial risks to life or property?			✓	
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?				✓

## NARRATIVE DISCUSSION

### Environmental Setting

The project site and the City of Stockton area located in an upland portion of the San Joaquin Valley on inter-bedded alluvial clay, silt, sand, and gravel deposits of the lower terraces of the San Joaquin River. These sediments, which range up to 60,000 feet in depth, are estimated to be about 3,000 feet in the Stockton area; the sediments were eroded from the Sierra Nevada range to the east during the Quaternary period and were deposited in fresh water lakes and marshes; deeper sediments are predominately marine in nature. Most of the Stockton area is underlain by the "Modesto Formation," which consists primarily of the late-Pleistocene alluvium (City of Stockton, 2007). The project site and surrounding lands are nearly level surface at an elevation of approximately 10 feet above mean sea level.

There are no active or potentially active faults in the site vicinity; the project site is not exposed to Alquist-Priolo or other fault rupture hazards. The site is subject to potentially intense seismic shaking. The California Division of Mines and Geology has determined the peak ground acceleration for potentially-occurring earth quakes throughout the State; in the Stockton area, peak ground accelerations could range from 0.20 g to 0.30 g (City of Stockton, 2007). There are no other known geologic hazards that would affect the site.

Soils on the project area consist of Jacktone - Urban Land complex. Jacktone - Urban Land complex is made up of 50% Jacktone Clay and 35% urban land. The soil is moderately deep and is somewhat poorly-drained. The shrink-swell potential of this soil is high. The Jacktone-Urban land complex soil mapping unit is not designated as a "Prime" soil. Topography of the site is essentially flat.

### Environmental Impacts and Mitigation Measures

a-1) Fault Rupture Hazards. There are no active or potentially-active faults on or in the vicinity of the project, and as such, the project site would not be exposed to fault rupture hazards. The project would have no effect in this issue area.

a-2, 3) Seismic Hazards. The project site is exposed to potentially strong seismic shaking and portions of the City may be subject to liquefaction or other ground stability hazards. The City will require preparation of a geotechnical report in conjunction with the review and approval of proposed building plans. The Stockton General Plan EIR (City of Stockton, 2007) indicates that potential seismic shaking hazards would be reduced to a less than significant level through the implementation of applicable General Plan Safety policies, including:

**HS-3.1 Seismic Safety of Structures and Public Facilities.** The City shall require that new structures intended for human occupancy, public facilities (i.e., treatment plants and pumping stations, major communication lines, evacuation routes, etc.), and emergency/disaster facilities (i.e., police and fire stations, etc.) are designed and constructed to minimize risk to the safety of people due to ground shaking.

**HS-3.2 Development in Areas Subject to Geologic Hazards.** The City shall require all proposed developments, reconstruction, utilities, or public facilities situated within areas subject to geologic-seismic hazards as identified in the soils engineering and geologic-seismic analysis to be sited, designed, and constructed to mitigate the risk associated with the hazard (e.g., expansive soils, liquefaction, etc.).



**HS-3.4 Uniform Building Code.** The City shall require that alterations to existing buildings and all new buildings be built according to the seismic requirements of the Uniform Building Code.

The project would involve a less than significant effect in this issue area.

a-4) Landslides. The project site is flat and not prone to landslide hazards. The project would have no effect in this issue area.

b) Soil Erosion. The project would result in some potential for soil erosion during construction. Significant soil erosion will be prevented by the relative flatness of the site as well as by mitigation measures prescribed in Section 8 Hydrology and Water Quality. Among other things the project will need to include an Erosion Control Plan and a Stormwater Pollution Prevention Plan to be prepared and implemented during construction as required by the City of Stockton's Storm Water Management Plan and pursuant to its most recent MS4 storm water permit from the Regional Water Quality Control Board. These requirements, which are spelled out in detail in Section 3.10 would reduce potential erosion effects to a less than significant level.

c) Geologic Instability. As discussed in response "a-2, 3" above, while the project may be subject to ground instability, implementation of City of Stockton general plan policies and implementation measures will avoid significant exposure to these hazards. The project will not involve a significant effect in this issue area.

d) Expansive Soils. The project would be constructed on expansive soils. Potential effects associated with expansive soils would be reduced to a less than significant level by incorporating the recommendations of the soils engineering study into building plans and specifications; the soils engineering study is required by existing City policies and procedures.

e) Adequacy of Soils for Sewage Disposal. The proposed project will be served by City of Stockton sewer lines located in Brookside Road. The site will not require the support of septic tanks or alternative wastewater systems. The project will involve no effect in this issue area.

### 3.8. GREENHOUSE GAS EMISSIONS

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			✓	
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?			✓	

## NARRATIVE DISCUSSION

### Environmental Setting

Global climate change is a subject of increasing scientific and public concern and government action; global climate change is widely understood to be the result of atmospheric concentrations of greenhouse gases (GHGs) that trap heat in the earth's atmosphere. GHGs are naturally occurring and are emitted by human activity. GHGs include carbon dioxide (CO<sub>2</sub>), the most abundant GHG, as well as methane, nitrous oxide and other gases. GHGs other than CO<sub>2</sub> have considerably higher "global warming potential" than CO<sub>2</sub> ranging from 21X for methane to 264X for HFC-23. Total worldwide emissions of GHGs in 2004 were estimated at about 20 million metric tons of CO<sub>2</sub> equivalent (MMT CO<sub>2</sub>e); U.S. emissions in 2013 were estimated at about 19% of worldwide emissions, about 6.7 MMT CO<sub>2</sub>e (EPA 2015).

GHG emissions are associated with the combustion of carbon-based fuels; major GHG sources in California include transportation (37%), generation of electric power, included imported power (20%), industrial (23%), agriculture and forestry (8.3%) and others (8.3%). GHG emissions in California in 2013 were estimated at 459 MMT CO<sub>2</sub>e (CARB, 2015).

Concerns related to GHG emissions and climate change include the potential direct consequences of an altered, warmer climate but also include reduced air quality, reduced snowpack and overall precipitation, resulting impacts on water supply, higher-intensity storms, rising sea level and the potential impact of these changes to land use, ecosystems and the species that depend on them.

The State of California has been actively identifying and implementing GHG emission reduction programs through AB 32 the Global Warming Solutions Act of 2006. AB 32 identifies global climate change as a "serious threat to the economic well-being, public health, natural resources and the environment of California." A project that would contribute to global climate change may have a significant effect on the environment; therefore, global climate change needs to be considered under CEQA.

The State adopted its primary policy and strategy document, the *Global Climate Change Scoping Plan* in December 2008, which was most recently updated in 2014 (CARB, 2014). Primary strategies addressed in the Scoping Plan include new industrial and emission control technologies, alternative energy generation technologies, advanced energy conservation in lighting, heating, cooling and ventilation, reduced-carbon fuel requirements, promotion of hybrid and electric vehicles, and other methods of improving vehicle mileage per unit of fuel. The Scoping Plan identified indirect GHG reduction opportunities related to planning and approval of new land development; GHG emissions associated with land development could be reduced by promoting use of alternative transportation modes, reduction in vehicular travel, and site and building designs that increase energy efficiency. Smart Growth, "sustainable development" and "compact development" represent new development patterns that may result in indirect reductions in GHG emissions; infill projects are recognized as projects that inherently produce such results.

Over a period of approximately seven years, the City of Stockton developed a Climate Action Plan (CAP), which was adopted in August of 2014. The CAP "outlines a framework to feasibly reduce community GHG emissions in a manner that is supportive of AB 32 and is consistent with the Settlement Agreement and 2035 General Plan policy." The CAP addresses a range of potential GHG reduction measures, including reduction of GHGs associated with government operations; more specific to the project, the CAP implement Stockton General Plan Policy HS-4.20 by adopting new policies that "require new development to reduce its greenhouse gas

emissions to the extent feasible in a manner consistent with state legislative policy as set forth in AB 32.

During this same period, and among other GHG-related agency action, the San Joaquin Valley Air Pollution Control District (SJVAPCD) adopted a Climate Change Action Plan (CCAP) in 2008, and issued guidance for development project compliance with the plan in 2009. The CCAP approach relies on the use of Best Management Practices (BMPs) to reduce GHG emissions and avoid significant climate change effects. With the CCAP approach, projects implementing BMPs are determined to have a less than significant effect on global climate change. For projects not implementing BMPs, the project would need to demonstrate the incorporation of features or mitigation measures that would result in a 29% reduction in GHG emissions from 2020 “business-as-usual” conditions in order to reduce potential climate change effects to a less than significant level.

The CAP incorporates a GHG reduction strategy for new development strategy that is consistent with that described in the CCAP. The CAP describes a Development Review Process (DRP) through which development project documents incorporation of the measures that would produce a 29% reduction in what would otherwise be 2020 business-as-usual GHG emissions. The majority of these reductions are generated from State regulatory programs and local programs that are producing or will produce GHG emission reductions that would help to reduce total emissions associated with the project by approximately 25%, or about 86%, of the required 29% emission reduction. Development must identify the BMPs that would provide the additional 4% reduction in GHG emissions. Potentially-applicable BMPs with quantified GHG emission reduction potential are described in detail in the CAP; numerous BMPs that are potentially applicable to the project are discussed in the Environmental Impacts and Mitigation Measures section, following.

The CAP describes additional “Supporting BMPs that will contribute to GHG emission reduction, but potential emission reductions are not quantified. The CAP also describes a non-mandatory Climate Impact Study that can be used to document GHG emission reductions; projects may also use equivalent analysis to document GHG emission reductions. The CAP also includes substantial background information on global climate change and GHG emission reduction, including a extensive discussion of applicable regulatory requirements.

## **Environmental Impacts and Mitigation Measures**

a) Significance of GHG Emissions. The project would develop on-campus living quarters for 381 UOP students. Operation of the proposed residence buildings and grounds would involve new GHG emissions. Operational emissions would result from energy use for lighting, heating, ventilation and air conditioning as well as energy use associated with building and landscape maintenance. As documented in Section 16 of this Initial Study, the project would result in potential increases in vehicle travel, although these increases will be offset to some degree by providing housing for existing off-campus resident population and reducing student commute travel.

The potential for the project to generate greenhouse gas emissions that could have a significant impact on the environment was analyzed consistent the Development Review Process (DRP) and the Climate Protection Impact Study Process (CISP) described in the CAP. As provided by the CAP, state and local programs would provide for most of the GHG reduction (25% of 29%) required by the CAP for a project’s global climate change impacts to be considered less than significant.

The remaining 4% of GHG emission reductions would need to come from project features. It was anticipated that the project would inherently reduce potential GHG emissions through its access to and widespread student use of bicycle and pedestrian modes between the residences and primary student destinations on the main UOP campus. Project design also seeks to achieve LEED Silver or better standards, which will result in substantial reductions in energy use in building lighting and HVAC, water supply and waste disposal.

Each of the GHG emission reduction measures described in the CAP, DRP and CISP was considered for its applicability to the project, and the qualification of the project for GHG emission reduction credits, by the project developer, project architect and CEQA consultant using the Operational BMP Scorecard shown in Section 6.2.2 of the CISP, Appendix F of the CAP. As shown below, the project would account for substantially more GHG emission reductions than the 4% required by the CAP and associated documents. As a result, the project would not generate GHG emissions that could have a significant impact on the environment. The project's effect would be less than significant in this area of concern.

BMP-19 Bicycle Parking

0.6

The project will provide bicycle storage equivalent to or exceeding the BMP description. Bicycles are an important transportation mode for on-campus residents and other students. In the residence halls, however, students often prefer to store bicycles in their rooms for improved security. The project will be supplied with ample bike rack space to meet all anticipated bicycle parking needs.

BMP-21 Bicycle Lanes

0.6

The project is immediately adjacent to the Class 1 bike/pedestrian lane and bridge connecting the site to the UOP main campus and most of the facilities used by students. The project will have immediate access to the City's off-campus network of bicycle routes.

BMP-22 Pedestrian Network

0.8

The project has immediate access to pedestrian facilities, which are integrated with the bicycle facilities described in BMP-21.

BMP-26 High-Density Residential Development

6.9

The project involves on-campus student housing, which does not constitute "high density residential" as defined in the Stockton Development Code. However, project involves high residential density and is in close proximity to existing on-campus alternative transportation and is in relatively close proximity to SJRTD Bus Rapid Transit routes along Pacific Avenue and Pershing Avenue.

BMP-30 Orientation Toward Alternative Transportation

0.4

The project is immediately adjacent to bicycle and pedestrian facilities linking it to all elements of the UOP campus. See BMPs 21 and 22.

BMP-36 Parking Limits

4.5

The proposed project will provide minimum parking capacity required to accommodate resident students and staff. Project parking capacity will be obtained from underutilized parking in the adjacent University Townhomes project to the degree feasible, as determined in the KDAnderson Traffic and Parking study.

BMP-43 Energy Star Roof

0.5

Proposed structures will be roofed with highly-reflective (minimum 0.72 albedo) roofing material meeting LEED criteria.

BMP-44 Energy Star Appliances

0.2

All project appliances will be Energy Star certified.

BMP-45 Lighting Standards

0.2

The project will utilize energy-efficient lighting, including LED fixtures, in both interior and exterior areas to the degree feasible.

BMP-50 Low-Flow Fixtures

0.2

The project will incorporate low-flow fixtures consistent with LEED Silver criteria, State and City water conservation requirements.

BMP-51 Water-Efficient Landscapes

0.1

BMP-52 Smart Irrigation Control Systems

0.1

The project will incorporate water-efficient landscaping materials and irrigation controls.

BMP-56 Institute Recycling Services

0.7

The project will incorporate convenient recycling systems consistent with and exceeding existing campus-wide UOP recycling practices.

TOTAL GHG EMISSION REDUCTION

15.8%

In addition to the above-listed BMPs, the project may result in substantial additional GHG emission reductions. Some of these would be derived from other features of design or facility management yet to be defined. The project is in the design process, but many details that could contribute to further GHG emission reductions remain undefined. Other potential reductions could result from project features that would be beneficial but may not be within the BMP description. These include the following:

BMP-20 End-Use Facilities

Each student resident would have available restroom, shower and personal belonging storage integrated in proposed residential units.

**BMP-37    Parking Lot Design**

Portions but not all of the proposed parking areas would be consistent with the BMP description.

**BMP-39    Exceed Title 24**

The project would be designed to a high energy efficiency standard, but it is not certain whether project efficiency would exceed the current version of Title 24 by 15%.

**BMP-40    Solar Orientation**

The project is substantially consistent with the solar orientation description, but additional information is needed to determine its consistency with the BMP description.

**BMP-41    Non-Roof Surfaces**

It is hoped that most non-roof surfaces will be highly-reflective, but this may be prevented by other applicable design standards.

**BMP-47    On-Site Renewable Energy**

On-site renewable energy facilities may be included in the project, but a decision to do so is dependent on information to be developed.

**BMP-49    CALGreen Voluntary Measures**

The project will incorporate water-conserving fixtures as discussed for BMP-50, but potential consistency with BMP-49 cannot be determined at this time.

**BMP-54    Native Landscaping**

Some native landscaping materials will be incorporated into the project, but proposed landscaping plans may not be consistent with the BMP description.

b) Consistency with GHG Reduction Plans. The Stockton CAP is the applicable plan and policy for the reduction of greenhouse gas emissions within the City of Stockton. As discussed in the above analysis, the proposed project includes features that will produce substantially more reductions in GHG emissions than sought by the Stockton CAP. The project would not involve any known inconsistency or conflict with the Stockton CAP and would therefore not conflict with an applicable plan or policy adopted for the purpose of reducing the emissions of greenhouse gases. The project would not involve any conflict with any known regulation adopted for this or similar purposes. The project will have a less than significant effect in this area of concern.

### 3.9 HAZARDS AND HAZARDOUS MATERIALS

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?				✓
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?				✓
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				✓
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?			✓	
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?				✓
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?				✓
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				✓
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?				✓

### NARRATIVE DISCUSSION

The following discussion is drawn primarily from the *Public Review Draft Initial Study/Mitigated Negative Declaration for the University of the Pacific Calaveras River Housing Project* dated March 29, 2012 and prepared by Kleinfelder, Inc. A new database search was conducted during the preparation of this Initial Study (see Appendix C), and the results of the new search were



compared to the results reported by Kleinfelder; no substantial variation in the facts reported was observed.

## Environmental Setting

The proposed project site is located on the UOP campus, north of the Calaveras River and south of Brookside Drive, and more specifically on existing tennis courts and a portion of parking Lot 13 at the UOP Physical Plant. The site has been fully disturbed through the development of previous UOP facilities.

Historical aerial photographs depict the proposed project site as an agricultural field in 1957. By 1963 structures and parking areas are visible adjacent to the west of the site, but the site itself is visible as an open field area. By 1970, tennis courts were constructed, and a large structure, the UOP Physical Plant, was located adjacent to the east boundary of the project site by 1998. The Calaveras River is located south of the project site beyond which other UOP facilities and athletic fields are visible. Land uses in the general vicinity consist of single-family residential properties to the north and UOP facilities that surround the remainder of the project boundaries.

A regulatory database report was obtained and reviewed for the site and the surrounding area to identify sites where contamination incidents have been reported or for nearby operations that use or are generators of hazardous materials. UOP was listed on multiple databases (CHMIRS, RCRA-LQG, FINDS, HIST UST, AST, NPDES) appearing as “University of the Pacific” or “Klein Family Field.”

The site was listed on the National Pollutant Discharge Elimination System (NPDES) database for a prior permit (No. CAS00002). The jurisdictional Certified Unified Program Agency (CUPA) indicates an active 1,762-gallon above ground storage tank (AST) on the UOP campus. This tank is not located on the proposed project site.

The project appears on the Resource Conservation and Recovery Act (RCRA) database due to its status as a large quantity generator of hazardous waste, e.g. CAM 17 metals, chloroform, non-halogenated solvents, cyanide from electroplating operations, etc. It also appears on the HAZNET database as a generator of laboratory waste chemicals, asbestos-containing waste, and other organic solids. The wastes are transported off-site for treatment and disposal.

Prior regulatory violations were reported. The Facility Index System/Facility Identification Initiative Program Summary Report (FINDS) contains both facility information and pointers to other sources that contain more detail; in this instance the FINDS listing references the RCRA-LQG and HAZMAT databases, which have been discussed. UOP appears on the California Hazardous Material Incident Report System (CHMIRS) for prior spills involving hydraulic fluid and chloroform. The spills were contained and cleaned up.

Two off-site facilities appear on the LUST database as open investigation with the Regional Water Quality Control Board. The Pacific Car Wash, located at 4405 Pacific Avenue, is approximately 2,346 feet north/northeast of the site and Exxon Service Station No. 7-3942 listing, located at 4444 North Pershing Avenue, is approximately 2,068 feet north/northwest of the site. Due to distance, these cases are not considered a threat to the project site.

There are four facilities listed within the ASTM regulatory agency databases. These include a portion of UOP at 1081 West Mendocino Street, 767 feet to the south; this site appears on the LUST database as Case Closed; Shell #204-7524-2408, located at 4445 Pershing Avenue, ¼ to ½ mile to the east, appears on the LUST database as Case Closed; 7-11 Store #17334, located at ¼

to ½ mile to the east, appears on the LUST database as Case Closed; 4501 Pershing Ave Stockton Unified School District, located at 1621 Brookside Drive, ¼ to ½ mile to the south/southeast, appears on the LUST database as Case Closed; and Kohl Elementary School, located at 4131 Crown Avenue, ¼ to ½ mile to the southeast, appears on the ENVIROSTOR database for a Preliminary Endangerment Assessment related to a proposed school investigation.

Existing Pacific Gas & Electric transmission towers equipped with 60 kilovolt (kV) lines are located adjacent and southwest of the project site. The transmission towers originate from a nearby Pacific Gas & Electric substation that is located south of the Calaveras River. Additionally, Pacific Gas & Electric also owns the 12 and 20 kV distribution lines that span the existing parking lot located west of the project site.

The project site is in an urban area, and therefore not in a wildland fire zone. The project site is not located near a public use airport. There are no railroads in the vicinity of the site.

## **Environmental Impacts and Mitigation Measures**

a, b) Upset and Transportation Hazards. The proposed project would involve no substantial use of hazardous materials in either construction or operation. Project operation would involve no potential for upset or release of hazardous materials.

c) Hazardous Materials Use or Emissions Near Schools. The project would not involve any substantial hazardous materials use or air emissions that could affect nearby schools.

d) Hazardous Materials Sites. The regulatory database report indicated six off-site LUST sites within the ASTM search distance. All but two of the listings have been closed or are indicated as no further action by the jurisdictional agency and are not expected to have an adverse impact on the site. The two remaining sites are current groundwater investigation cases; however given the distances of the listed sites in relation to the proposed project site, they will not adversely affect the project area.

The project area appears on the RCRA (large quantity) and the HAZMET databases due the generation of hazardous material waste, e.g. CAM 17 metals, chloroform, non-halogenated solvents, asbestos-containing waste, etc. The wastes are transported off-site for treatment and disposal. Prior violations were reported but were minor in nature. Several hazardous materials spills were also reported on the CHMIRS that were contained and remediated in compliance with regulatory requirements. Additionally, the regulatory database report indicates an active 1,762-gallon capacity AST on the campus. However, the project site itself contains tennis courts and a parking lot and a tank is not present. The AST feature is likely located offsite and near the structures that lie northeast (UOP Physical Plant) of the site. There have been no reported spills associated with the AST and its presence at an off-site/adjacent location will not adversely affect the project site.

The project site is located in the vicinity of existing 60 kV Pacific Gas & Electric transmission line towers. Electric currents traveling in the transmission lines produce electric and magnetic fields. Some scientific studies have indicated a link between electromagnetic fields (EMFs) and adverse health effects. The reported results thus far are inconclusive but research continues on the effect of EMFs on human health. Without any conclusive scientific evidence as to the adverse effects of EMFs, there would not be a basis in which to conclude that future student housing would be exposed to significant hazards.

In an effort to deal with the uncertainty, some local governments have adopted setback standards for certain land uses in proximity to EMFs. The City of Stockton however does not have regulations that restrict land uses and the only established policy on the issue is by the California Department of Education. The policy states in part that a transmission line setback of 100 feet minimum is maintained between new school sites and existing electrical power lines with a voltage of more than 50 kV to avoid any potential risks associated with EMFs. No setback is required for 12 and 20 KV distribution. These requirements do not apply to existing school sites.

e, f) Aircraft Operations Effects. Project development is not subject to Airport Land Use Plan restrictions nor is the site located within a Safety Zone (Stockton Metro Airport Master Plan, 2009).

g) Emergency Response Effects. The proposed project would involve no conceivable impairment of emergency response or evacuation activities. New construction would provide additional options for emergency response planners.

h) Wildland Fire Hazards. The project site lies within the City of Stockton and is not subject to wildland fire hazards.

### 3.10 HYDROLOGY AND WATER QUALITY

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements?		✓		
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?				✓
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?		✓		
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?			✓	
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater			✓	

drainage systems?

g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?

i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of a levee or dam?

j) Inundation by seiche, tsunami, or mudflow?

			✓
			✓
		✓	
			✓

## NARRATIVE DISCUSSION

### Environmental Setting

There are no existing surface water resources on the project site. The Calaveras River, contained by a flood protection levee system, is adjacent to the south project boundary. The low flow channel of the River is located between 150 and 300 feet south of the site. During high flow periods, the River expands in width to the levee containment.

The Calaveras River levee was constructed to 100-year flood protection standards by the U.S. Army Corp of Engineers; the levee is maintained by the San Joaquin County Flood Control and Water Conservation District. The District, in cooperation with the State of California Department of Water Resources, maintains the integrity of the levee system through a combination of inspections, rodent and vegetation control programs, and on-going maintenance programs.

The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (Map 06077C0455F, 2009) locates the site in Zone X, which is considered an “Other Flood Area” that includes areas of 500-year flooding; areas of 100-year flooding with average depths of less than one foot or with drainage areas less than one square mile; and areas protected by levees from 100-year flood. Zone X is not considered a “floodplain” area. The area within the Calaveras River levees is designated by FEMA as being within Zone A, the 100-Year floodplain.

California Senate Bill 5 and related legislation requires that 200-year flood protection be provided to urban and urbanizing areas, including the City of Stockton by 2025. After July 2, 2016, the City may not approve new urban development in areas subject to 200-year flooding greater than 3 feet in depth unless either 200-year flood protection is in place or “adequate progress” has been made toward the provision of 200-year flood protection by 2025. These requirements have been addressed in an amendment of the City’s general plan, which was approved on June 23, 2015 and will be further addressed in an amendment of the City Development Code to be completed before July 2, 2016.

The California Department of Water Resources *Best Available Mapping* web site does not include 200-year floodplain mapping for the project site and vicinity. Mapping prepared by the Central Valley Floodplain Evaluation and Delineation (CVFED) Program and included in the City’s SB 5 General Plan Amendment indicates that 200-year flood depths will not exceed 3 feet on the project site; the northernmost portion of the University Townhomes, approximately 500 feet north

of the proposed student housing building, is included in an area subject to 200-year flooding more than three feet in depth.

The proposed project site and most of the Stockton area is exposed to potential flooding from catastrophic failure of large dams located in the foothill areas to the east of the City. The risk associated with potential failure of these facilities is described as significant in the Stockton General Plan EIR, but this risk was judged to be acceptable when the General Plan was adopted. The project site is not subject to inundation by seiche, tsunami, or mudflow.

Groundwater beneath the City of Stockton and San Joaquin County is part of the alluvial Central Valley aquifer system. Aquifer thickness ranges from around 100 feet in the eastern portion of the County to over 3,000 feet at the southwestern end; beneath the City, the aquifer thickness is approximately 1,000 feet. In portions of the aquifer, agricultural, municipal and industrial pumping has exceeded its sustainable yield and caused a decline in groundwater levels and allowed saltwater intrusion. Approximately 40% of the City's potable water supply is derived from groundwater. According to the County's Spring 2015 *Groundwater Report*, the groundwater level in the project area is approximately 20 feet below the ground surface.

## **Environmental Impacts and Mitigation Measures**

The project site is currently developed with tennis courts and parking area. The project will replace these uses with a new student housing building. Project development will involve site grading, a reduction in impervious area coverage and changes to existing drainage patterns. The project will not directly affect surface or groundwater resources.

a, c, f Erosion, Sediment and Water Quality. The project will involve an increase in residential use of the site and an associated increase in wastewater generation; the site presently does not generate wastewater. Wastewater will be conducted to the City's wastewater collection system and transported to the City's Regional Wastewater Control Facility for treatment. Wastewater generated by the project would not involve any unusual or highly concentrated wastewater and would not have any substantial effect on the RWCF's ability to comply with Waste Discharge Requirements.

The project will involve an approximately 12,000 square feet and an increase in runoff of as much as 500 cubic feet during the design storm, prior to application of storm water controls (Khloth, pers. comm.).

Construction of the proposed project would involve ground disturbance, with an associated potential for erosion, discharge of sediment, and the discharge of other construction-related pollutants from the site in storm water runoff. Other construction-related pollutants may include elevated pH from runoff contact with soils stabilizers, cement, petroleum hydrocarbons and toxic materials. The project would not involve a direct storm water discharge to surface waters; storm water discharges from the site would be directed to existing private on-campus storm drains that discharge to the City storm drain system, which drains to surface waters in the project vicinity.

Proposed residential use of the site would result in the generation of urban runoff from buildings, parking, other paved and landscaped areas, which would be contributed to the City's storm drainage system over the long term. Urban runoff pollutants may include sediments, heavy metals, petroleum hydrocarbons, microbial pathogens, pesticides, materials toxic to aquatic life, and nutrients that may contribute to depressed dissolved oxygen levels. As with construction runoff, post-construction urban runoff would be discharged to private on-campus storm drains, then to the City storm drain system, and then to surface waters in the project vicinity.

The State Water Resources Control Board (SWRCB) has the responsibility under the federal Clean Water Act and the National Pollutant Discharge Elimination System (NPDES) program for the control of storm water quality. The State has adopted a general permit for construction activity that would apply to the project. Additional storm water regulation is established in the NPDES area-wide municipal separate storm sewer system (MS4) permit system administered by the SWRCB, which requires affected jurisdictions, including the City of Stockton, to adopt and implement a Storm Water Management Program (SWMP).

The City's SWMP addresses the storm water quality effects of development, including construction and post-construction activity. The SWMP consists of a variety of programs, including controls on illicit discharges, public education, controls on City operations, and water quality monitoring. Program elements most applicable to land development include construction storm water discharge requirements, industrial discharge requirements and the requirement that post-construction Best Management Practices (BMPs) be incorporated into new development. Implementation of the SWMP is required under the City's Storm Water NPDES permit issued by the Regional Water Quality Control Board (RWQCB), Central Valley Region. Requirements applicable to the project are restated as mitigation measures below.

The principal SWMP control on construction storm water quality is the required preparation and implementation of a Storm Water Pollution Prevention Plan (SWPPP), which is required for development projects exceeding one acre in size. The SWPPP identifies potential pollution sources, needed BMPs, and maintenance and monitoring activities needed to prevent exceedence of applicable water quality standards. Construction BMPs include provisions for erosion control, including limitations on disturbance and temporary soil stabilization through the use of mulch, seeding, soil stabilizers, and fiber rolls and blankets. BMPs may also include filtration devices, silt fences, straw bale barriers and sediment traps or basins. Erosion control plans must also be incorporated into construction drawings submitted for City approval.

City ordinances require compliance with the City's adopted Storm Water Quality Control Criteria Plan (SWQCCP), which identifies post-construction BMPs that must be incorporated into development plans. BMPs include provisions for water quality control as well as reduction of runoff volume. Volume control can be achieved through a combination of low-impact development and direct volume control measures. Post-construction BMPs include such features as vegetated buffer strips and swales, detention basins, vaults and wetlands, and filtration and infiltration devices, among others. The project will be required to conform to the applicable requirements; the specific measures to be applied to the project will be finalized during the design phase; however, the project architects indicate that post-construction BMPs will include a combination of vegetated drainage ways and ground percolation features (Stradley, pers. comm.).

Developers will be required according to existing City procedure to enter into an agreement for maintenance of the post-construction BMPs. Further, the developers will be required to comply with the City's SWQCCP, which requires compliance with both stormwater treatment and stormwater runoff volume reduction.

The project has the potential for significant water quality effects. However, required compliance with the applicable City stormwater quality requirements discussed above and listed below, would reduce potential water quality effects to less than significant.

Level of Significance: Potentially Significant

Required Mitigation Measures

- HYDRO-1      The ODS shall prepare and implement a Storm Water Pollution Prevention Plan (SWPPP) for the project and file a Notice of Intent (NOI) with the State Water Resources Control Board prior to commencement of construction activity. The SWPPP shall be available on the construction site at all times.
- HYDRO-2      The ODS shall incorporate an Erosion Control Plan consistent with all applicable provisions of the SWPPP within the site development plans.
- HYDRO-3      The ODS shall submit the SWRCB Waste Discharger's Identification Number (WDID) to the City prior to approval of development or grading plans.
- HYDRO-4      The ODS shall submit a Storm Water Quality Control Criteria Plan that shall include post-construction Best Management Practices as required by Title 13 of the SWQCCP. The Storm Water Quality Control Criteria Plan will be reviewed and approved by the MUD prior to the Certificate of Occupancy.
- HYDRO-5      The ODS shall execute a Maintenance Agreement with the City for stormwater BMPs prior to receiving a Certificate of Occupancy. The ODS must remain the responsible party and provide funding for the operation, maintenance and replacement costs of the proposed treatment devices built for the subject property.
- HYDRO-6      The ODS shall comply with any and all requirements of, and pay all associated fees as required by, the City's Storm Water Pollution Prevention Program as set forth in its NPDES Storm Water Permit.

Significance After Mitigation: Less than significant

b) Groundwater Supplies. The project will not involve any direct effect on groundwater. The project will not involve any substantial use of groundwater, new well construction or any other activity that could directly affect underlying groundwater. Construction dust control would indirectly use groundwater obtained from the City water system. The project will not involve direct groundwater withdrawals. Maximum project excavation will be in the range of 15 feet and would not be expected to intercept groundwater.

The project would not have any substantial effect on groundwater recharge. Project construction will involve construction of new buildings and pavement and remove existing tennis courts and other paved areas. The project will involve no substantial change in project site impervious area.

d, e) Drainage and Runoff. The project will not involve any substantial increase in the amount of runoff from the site. Runoff will be collected and discharged to UOP and City storm drains, which will be improved as required to accommodate project runoff. Project runoff would not cause or exacerbate flooding on- or off-site.

As discussed above in "a" and "c," construction and post-construction runoff would be subject to City storm water quality controls, which would reduce the potential for discharge of polluted runoff to a less than significant level. The project would have a less than significant effect in this issue area.



g) Flood Exposure. The proposed project would involve no significant exposure to 100-year flooding. The project site is not located in a designated 100-year floodplain area. The project site is not exposed to 200-year flooding more than three feet in depth.

h) Impacts on Floodways. The project would not involve construction in any floodway or otherwise impede or redirect flood flows.

i) Dam Failure Hazards. The project as well as the remainder of the City of Stockton would be exposed to dam failure risks; these risks have been deemed acceptable in the Stockton General Plan EIR, and therefore, the project would not have a significant effect in this issue area.

j) The project area is not subject to seiche, tsunami or mudflow hazards. The project would have no effect in this issue area.

### 3.11 LAND USE AND PLANNING

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Physically divide an established community?				✓
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?				✓
c) Conflict with any applicable habitat conservation plan or natural communities conservation plan?				✓

### NARRATIVE DISCUSSION

#### Environmental Setting

The project site is located in an urbanized area of central Stockton. The site is a portion of the UOP campus. Land uses surrounding the campus consist predominantly of single- and multi-family residential neighborhoods. The Pacific Avenue corridor east of the campus has been developed with commercial retail and office uses. Stagg High School is located northwest of the campus along Brookside Road.

The project site is currently developed with UOP facilities including nine tennis courts, an associated club house and a portion of (parking) Lot 13 at the UOP Physical Plant. Existing land uses immediately surrounding the site are as follows:

<b>Adjacent Uses</b>	<b>Zoning (City)</b>	<b>General Plan Designations</b>
<b>North:</b> Playing fields, UOP Physical Plan; further north single-family residential neighborhood	RL (Residential Low Density)	Institutional, Low Density Residential
<b>South:</b> Calaveras River, UOP	Calaveras River is un-zoned RL (Residential Low Density)	Institutional
<b>East:</b> UOP parking, church	RL (Residential Low Density)	Institutional
<b>West:</b> UOP student housing (University Townhomes, Greek House)	RL (Residential Low Density), RH (Residential High Density)	Institutional, High Density Residential

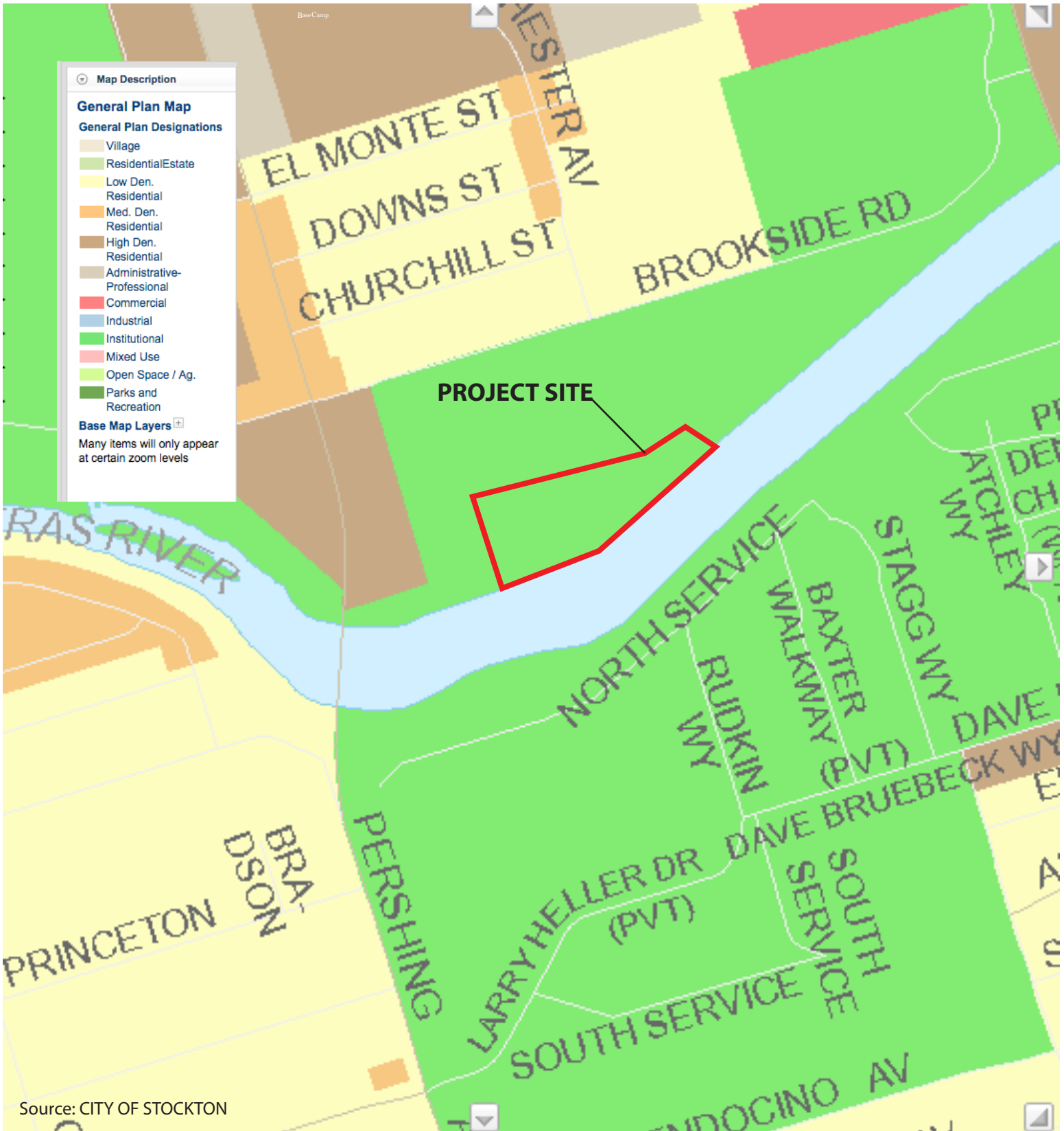
The project site is designated in the Stockton General Plan for Institutional use. The site is zoned RL (Residential Low Density). The Stockton General Plan designates the project site as Institutional. Colleges and universities, such as UOP, including on-campus student housing and other accessory uses, are listed as allowable uses in this zoning district with a Planning Commission Use Permit. The project site has operated as a part of the UOP campus since approximately 1970.

## **Environmental Impacts and Mitigation Measures**

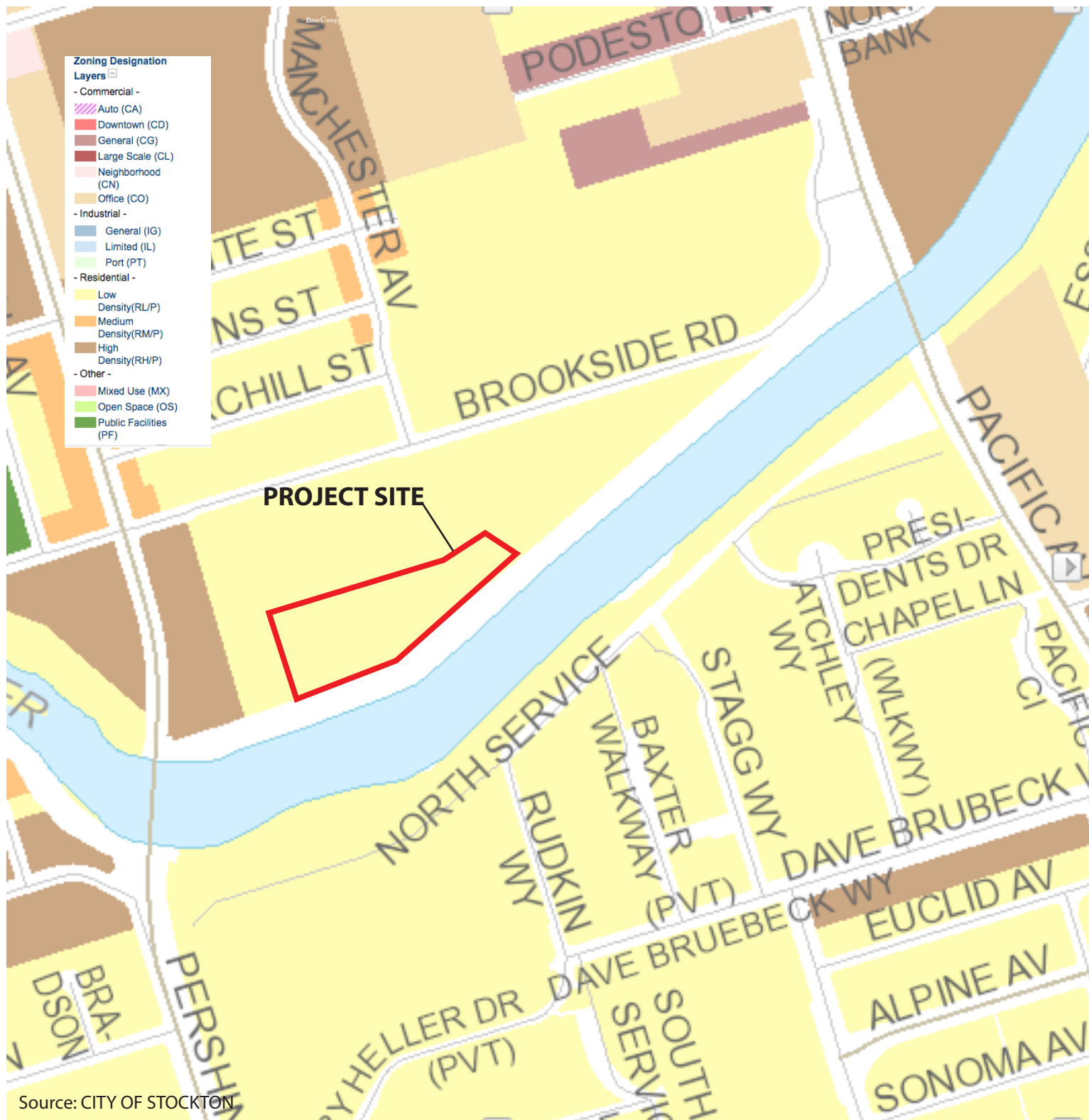
Project development will be preceded by demolition of the existing tennis courts and a portion of the parking Lot 13 at the UOP Physical Plant. The existing tennis courts will be replaced in an approved addition to existing University sports facilities south of the Calaveras River prior to demolition. Parking needs currently met by Lot 13 will be met elsewhere; parking demands and planned parking facilities that will accompany the project are described in Section 16 Transportation/Traffic.

The project involves development of a four-story upperclassman student housing building that will accommodate a total of 381 students as well as staff, including resident staff, and related common study, recreation and other improvements. Planned improvements will consist of new walkways, pool and inside and outside social and learning spaces. Parking needs will be met by restriping and realignment of the existing adjacent University Townhomes parking lot and construction of additional parking spaces in the area north of the Theta Chi house. The project will be served by existing street and utility infrastructure that surrounds the site.

a) Division of Established Community. The project will not divide a community and will enhance the on-campus community. The project will add new student housing in close proximity to the central portion of the UOP campus while providing needed student housing capacity essential to UOP's educational mission. It will also create additional learning and social community spaces for UOP students. This would be a beneficial effect.



Source: CITY OF STOCKTON



b) Consistency with Land Use Plans and Zoning. The proposed project is consistent with the existing Institutional general plan designations and City of Stockton zoning for the site, subject to the issuance of a Commission Use Permit, which is requested as a portion of the project. The project is consistent with Stockton General Plan objectives, goals and policies as well as applicable UOP master plans, which provide for the development of student housing north of the Calaveras River at the project site.

The new structure will be approximately 60 feet in height. The maximum building height in the RL zoning district is 35 feet; however, public and private institutional uses, including private schools, may be erected to a maximum height of 75 feet if all of the required setbacks are increased one additional foot for each foot that the buildings exceed the 35-foot height limit (Stockton Municipal Code Section 16.36.090.B.4). Staff has reviewed the proposed site plan and confirmed that adequate setbacks have been provided to more that accommodate the additional 25 feet of elevation that have proposed for the structures. Therefore, the height of the proposed structures complies with applicable Code requirements.

The project is bounded by existing UOP facilities to the north, west and east. The Calaveras River is adjacent to the south side of the project, separating it from the UOP main campus. There would not involve any conflict between nearby on-site or off-site land uses; the project would meet an existing UOP need, consistent with the applicable University master plans.

c) Conflict with Habitat Conservation Plan. The project site is within the coverage of the San Joaquin County Multi-Species Open Space and Habitat Conservation Plan (SJMSCP). The SJMSCP is discussed in Section 4 Biological Resources. The proposed project would involve no conflict with the SJMSCP.

## 3.12 MINERAL RESOURCES

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				✓
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				✓

## NARRATIVE DISCUSSION

### Environmental Setting

There are no known mineral resources associated with the project site. The proposed project site is currently developed for athletic use and is a part of the larger UOP campus development in the

City of Stockton. The Stockton General Plan does not identify any potentially valuable mineral resources on or near the site. The California Division of Mines and Geology Mineral Classification Map does not identify the project site as potentially containing known valuable mineral resources. The project site is located within an area mapped MRZ-1; these are areas with “little likelihood of containing significant deposits” of economic minerals (Jensen and Silva, 1988).

## Environmental Impacts and Mitigation Measures

a) Availability of Mineral Resources of State Value. The proposed project involve reorganization and further development of an existing developed portion of the UOP campus that has no identified mineral resource significance or value. The project would have no effect in this issue area.

b) Availability of Mineral Resources of Local Value The project would have no known effect on mineral resources and would not result in the loss of any locally important mineral resources. There are no mineral resources delineated on any general plan, specific plan or other land use plan applicable to the project site or vicinity. The project would have no effect in this issue area.

### 3.13 NOISE

Would the project result in:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?			✓	
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?				✓
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?				✓
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?		✓		
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?			✓	
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in				✓

the project area to excessive noise levels?

--	--	--	--

## **NARRATIVE DISCUSSION**

### **Environmental Setting**

The proposed project is located within the UOP campus, which is surrounded by existing urbanized areas of central Stockton. The campus is bordered on the east and west by urban arterial streets.

The site is currently developed with nine tennis courts and a portion of Lot 13 at the UOP Physical Plant. The site and adjacent properties to the north, west and east include existing UOP residences, playing fields, the UOP Physical Plant and vehicle, pedestrian and bicycle facilities. Property to the north of Brookside Road is developed, zoned and designated for single-family residential use.

Noise standards for the site are established in the Stockton General Plan. Table L-8 2035 of the General Plan Noise Element shows that Ldn noise levels up to 60 dB Ldn are considered normally acceptable for exterior noise levels in residential areas, while interior noise levels should be maintained at 45 dB Ldn or below. The Stockton Development Code prescribes a fixed outdoor residential noise standard of 65 dB Ldn. Noise sources in the project vicinity are limited to local traffic and current land uses. There are no highways in the vicinity.

j.c. brennan & associates, inc. (Brennan), prepared an Environmental Noise Assessment of the project (Appendix D). Brennan utilized noise levels measurement data that was collected for the Crown and Pershing Sanitary project in 2014; there have been no substantial physical changes to the site or surrounding areas since the time of this study in 2014.

Ambient noise measurement data was collected at two locations: 1) south of the project site along the south side of the Calaveras River and 2) west of the project site on the west side of Pershing Avenue, north of the Calaveras River. Table 3-2 below shows the results of the ambient noise level measurements in the project vicinity.

### **Environmental Impacts and Mitigation Measures**

a) Exposure to Noise Exceeding Local Standards. The proposed project is located within the UOP campus; land uses in the project vicinity are in use as university facilities and residences. Proposed residential uses are not expected to involve any significant noise generation that would affect proposed residential uses or adjacent land uses in a substantial way. Activities in the project open spaces or courtyards are not expected to involve organized sporting event. Performance or other events would occur in the planned event locations, and any amplified sound would be oriented to on-site gathering areas. Noise associated with such events would be internally regulated to maintain consistency with the proposed adjacent residential uses. Noise levels would also be required to comply with the City of Stockton daytime noise level standards of 75 dBA Lmax and 55 dBA Leq, and the nighttime standards of 65 dBA Lmax and 45 dBA Leq, (See Appendix D, Noise).



TABLE 3-2  
SUMMARY OF AMBIENT NOISE MEASUREMENT DATA  
UOP STUDENT HOUSING

			Average Measures Hourly Noise Levels, dBA					
			Daytime (7 am-10 pm)			Nighttime (10 pm-7 am)		
Site	Location	Ldn	Leq	L50	Lmax	Leq	L50	Lmax
			Continuous (24 Hour) Noise Level Measurements					
A	4110 Crown Ave, 156 feet to Pershing Avenue centerline	57.7	57.1	50.6	77.5	48.7	46.2	58.9
Short-term Noise Level Measurements								
1	North of Project	NA	54.6	54.5	58.9	@ 12:15 p.m.		
2	West of Project on Levee Trail	NA	56.3	55.4	63.7	@ 12:15 p.m.		
Source: j.c. brennan & associates, inc., 2014.								

The primary source of traffic noise in the vicinity of the project is Pershing Avenue, which is approximately 550 feet west of project; in addition to noise reduction due to distance from the roadway, the project would be shielded from Pershing Avenue noise by the University Townhomes, which create a barrier between the project site and the street noise source. Based on Table 3-2, which shows the background noise levels at noise monitoring Site A, (Crown Avenue, 156 feet from Pershing Avenue), the worst case Pershing Avenue noise would be less than 50 dB Ldn at the project site, which is well within City standards for residential uses. Brookside Road, the arterial road immediately north of the project site is estimated to generate noise level of 62 dB at a distance of 50 feet from the street centerline. The nearest portion of the project would be set back at least 400 feet from Brookside Road, further reducing noise impacts from this street. These noise levels would also be well within City of Stockton General Plan noise level criteria for residential uses. The proposed project would therefore be in compliance with these standards. The project would have a less than significant effect in this issue area.

b) Exposure to Groundborne Noise. The project would have no substantial exposure to or effect on ground borne noise levels, or ground borne vibration other than during construction. Construction related activities that could cause vibration include site grading and utility placement. The closest sensitive receptor to ground borne vibration or noise that could be generated by the project is 400 feet from the site. According to the Brennan report, at a distance of only 100 feet, construction vibrations are not predicted to exceed acceptable levels; therefore, construction vibration or noise would not exceed acceptable levels at the project site. Additionally, construction activities would be temporary in nature and would be limited to daytime working hours per City ordinance. The project would have no effect in this issue area.

c) Permanent Increase in Ambient Noise. The proposed project is consistent in type with nearby residential land uses, which are the most sensitive receptors in the project vicinity, and would generate ambient noise consistent with these existing uses. The proposed residential uses would have no substantial effect on ambient noise levels or effects on nearby housing. Noise generated by the project would have no effect on existing on-campus uses; the types of noise potentially generated by the project are consistent with existing on-campus noise levels. The project would have a less than significant effect in this issue area.

d) Temporary or Periodic Increase in Ambient Noise. Sensitive receptors in the general project vicinity include a single-family residential neighborhood approximately 450 feet to the north and the UOP University Townhomes development to the west. Construction noise would temporarily elevate noise levels in the vicinity of the project. When and if equipment is operating in the vicinity of existing residences near the project site or other noise-sensitive land uses, noise could cause disturbance of residents near the project site, particularly if construction occurs in the evening or at night when people typically relax and sleep. This source of noise would be significant in the immediate vicinity of construction and reduced with distance from the construction site; construction activities that generate substantial noise are typically short-term, approximately 3 to 4 months; at the project site, construction in the immediately vicinity of existing residences would be very limited, particularly in the vicinity of existing residential areas north of Brookside Road. When they occur, construction noise impacts would be reduced to less than significant with the mitigation measure listed below.

Level of Significance: Potentially significant

Mitigation Measures:

NOISE-1: Temporary noise impacts resulting from project construction shall be minimized by restricting hours of operation by noise-generating construction equipment to 7:00 a.m. to 7:00 p.m. Monday through Saturday. No construction shall occur on Sundays or national holidays without a permit from the City.

Significance After Mitigation: Less than significant

e, f) Aircraft Operations Noise. The project would involve no substantial exposure to aircraft noise. The Stockton General Plan Noise Element includes restrictive standards for development in areas in the vicinity of airports; the proposed project is located outside the Area of Influence of the Stockton Metropolitan Airport and would not be exposed to airport noise levels above 60 dB CNEL. Future residents could be exposed to occasional “single event” noises whenever an aircraft flies over the area. The project would have a less than significant effect in this issue area.

### 3.14 POPULATION AND HOUSING

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?			✓	
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				✓
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?				✓

## NARRATIVE DISCUSSION

### Environmental Setting

The project site is located within the City limits of the City of Stockton. The City of Stockton has grown from a 2010 population of 291,707 to an estimated January 2015 population of 306,999, which amounts to total growth over that 15-year period of about 5.2% (California Department of Finance, Report E-5).

The State reports the existence of 100,097 housing units in the City of Stockton in 2015. Approximately 71% of the housing units in Stockton are single-family units, approximately 28% are multi-family units, and about 1% are mobile home units (California Department of Finance, Report E-5).

The proposed project is located on the UOP campus; lands surrounding the campus consist primarily of existing single- and multi-family neighborhoods. UOP provides on-campus student housing for all freshmen; dorms, apartments and Greek houses are provided throughout the campus that address student living needs at all levels. The Theta Chi house and the University Townhomes are located immediately west of the proposed project. Single-family residential homes are located to the north of Brookside Road.

### Environmental Impacts and Mitigation Measures

The project would result in the construction of a new student housing building, which would provide 142 student apartments accommodating 381 residents in the Fall of 2017. The proposed project would help meet existing on-campus living needs and would encourage more existing off-campus residents and new students to live on campus. The proposed project would be considered an accessory facility to UOP, open solely to UOP students.

a) Population Growth Inducement. The proposed project is intended to meet existing demands for on-campus housing. In a general sense, residential capacity constructed by the project would add to the overall housing stock of the City of Stockton and create the potential for a potential increase of 0.2% in the citywide population. Population increases that may be associated with UOP student housing are well within the population growth framework of the Stockton General Plan. The project would have a less than significant effect in this issue area.

b, c) Displacement of Housing or People. The project would involve an increase in available housing within the City of Stockton, although the proposed units are targeted specifically to the UOP student population. The additional housing constructed by the project would amount to approximately 0.1% of the existing City of Stockton housing stock. This small increase would be offset in the future as some existing UOP student housing units are taken out of service.

By providing new on-campus housing, the project may result in a slight reduction in student demand for rental units in Stockton and vicinity but an increase in the availability of rental housing for other community members; this change in housing stock would amount to less than 1% and would not involve a significant effect on housing. The project would not involve the demolition of any existing housing or require construction of replacement housing at UOP or elsewhere in the community. The project would not displace any persons. The project would have no effect in this issue area.

### 3.15 PUBLIC SERVICES

Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
--------------------------------	--	------------------------------	-----------

- a) Fire protection?
- b) Police protection?
- c) Schools?
- d) Parks?
- e) Other public facilities?

	✓		
	✓		
		✓	
		✓	
		✓	

## NARRATIVE DISCUSSION

### Environmental Setting

Fire protection for the project will be provided by the City of Stockton Fire Department (SFD). The primary facility is Station 4, located at 2903 West March Lane; Station 4 maintains four fire department employees on duty at all times and is equipped with a water-carrying engine that also

has paramedic capabilities. The response time to the project site is estimated at less than four minutes. Second response would be provided by Fire Station No. 10, located on the Delta College campus at 5525 Pacific Avenue. This station also maintains a four-person engine crew. In the event of an emergency requiring hospital services, victims would be transported to the hospital of their choice, or in the event they cannot request a hospital, San Joaquin County Hospital dispatch would direct emergency service personnel.

The UOP Public Safety Department (PSD) has law enforcement jurisdiction over the UOP campus, including the project site, and in certain areas surrounding campus PSD is the designated first responder. The distribution of law enforcement responsibilities between UOP and the City of Stockton is governed by a Memorandum of Understanding. UOP is one of a few universities in California whose officers have full police officer power. Currently, PSD has approximately 12 sworn police officers and provides the Stockton campus with twenty-four hour-a-day, seven day-a-week service. PSD's responds to all calls, on the average, within a 3.5-minute time period. Currently, staffing levels at the PPD are 22-full time staff, which include sworn officers, community officers and support staff. UOP also provides a student/staff safety escort service from 6 p.m. to 2:00 a.m. seven days a week during the academic year; a shuttle service is operated on Thursday, Friday and Saturday during the same hours. Emergency phone units are located throughout the campus.

Law enforcement services for the project area are also the responsibility of the Stockton Police Department (SPD). It is SPD's policy to respond to all emergency calls within a three to five minute time period. Currently, staffing levels in the City of Stockton are determined by the City Council in consultation with the City Manager and Chief of Police. Currently there are no adopted service levels for the SPD; however the Police Department is aware that as population increases, higher levels of service may be required.

The proposed project is located within Lincoln Unified School District (LUSD). The nearest public schools to the site are as follows:

Elementary: Brookside (K-8), 2962 Brookside Road

High: Lincoln High School, 6844 Alexandria Place

There are no LUSD facilities in the vicinity of the project. The Stockton Unified School District (SUSD) includes portions of the UOP campus south of the Calaveras River, and the SUSD's Stagg High School campus is located in the project vicinity, west of Pershing Avenue and north of Brookside Road.

The City of Stockton is responsible for park facilities in Stockton. The closest City park facilities to the project site are to the south, Caldwell Park on Mariposa Avenue, and to the north, Weberstown East Park. There are no City park facilities in the immediate project vicinity.

University recreational facilities are addressed in Section 3.15 Recreation of this document.

## **Environmental Impacts and Mitigation Measures**

a) Fire Protection Impacts. Development of the proposed project would involve a minor addition to the responsibilities to the Stockton Fire Department. The project would have two emergency vehicle entry and access points as required by the Stockton Fire Department and subject to SFD review and approval. The Stockton Fire Department does not anticipate any problems serving the proposed project site, and accessibility is adequate. The proposed residential structures would not involve any particular fire protection concerns. The project must comply with the City of

Stockton's adopted Fire Code/Municipal Code. All fire lanes must be properly identified and a plan submitted for Enforcement of fire lanes. The project must also conform to California Fire Code's standard regulations regarding placement of fire hydrants, adequacy of water supply to the site, and emergency access.

Overall, the project is not expected to require an increased demand for fire protection services such that new or expanded Fire Department facilities would be required. However, the ODS is required by City ordinance to contribute Public Facility Fees toward the construction of new firefighting facilities.

Level of Significance: Potentially significant

Mitigation Measures:

SERV-1: The ODS shall incorporate access, water supply and other fire suppression and emergency access/response needs in the proposed project design.

SERV-2: The ODS shall install fire hydrants and water distribution facilities that will provide fire flows that are adequate to support the City's existing ISO rating and that conform to adopted Building Code Fire Safety Standards for all of the uses proposed within the project area.

Significance After Mitigation: Less than significant

b) Police Protection Impacts. Law enforcement services for the project site will primarily be the responsibility of the PSD. PSD responsibilities include the protection of UOP students and staff. PSD expressed no concerns about serving the project site (Crarya, Blake, pers. comm.).

Secondarily, law enforcement services for the project site will also be the responsibility of the Stockton Police Department (SPD). It is SPD's policy to respond to all emergency calls within a three to five minute time period. The SPD does not indicate any concern providing police protection service to the project as required. Currently, staffing levels in the City of Stockton are determined by the City Council in consultation with the City Manager and Chief of Police. PPD and SPD work closely together to serve the police needs of the UOP campus and vicinity.

UOP implements a campus-wide emergency program for its community as well. A campus emergency as defined by UOP, "may include fire, extreme weather, loss of power, pandemic, or other city, state, or federal emergencies that affect the University of the Pacific in Stockton, the Arthur A. Dugoni School of Dentistry in San Francisco, or the McGeorge School of Law in Sacramento." During an emergency, emergency.pacific.edu will be updated regularly as well as the UOP Emergency Information Hotline. This information is provided to the UOP community, and will include the future residents of the project site. In the event of a major emergency affecting multiple locations, UOP will attempt to send email and phone messages to all participants' emergency contacts within 72 hours of the event.

Project construction would, through the location of construction materials and equipment on the unoccupied site, involve new crime opportunities during the construction period. These can be minimized by construction site security, addressed in mitigation measures below.

Crime opportunities within areas of new development can be minimized by proper project design. Adequate emergency access onto the project site would be essential for responding to calls for service. These issues are addressed by the mitigation measures below.

Likewise, the proposed project will not involve any substantial increase in demand for UOP or City police protection services citywide. The proposed structures and site design will be coordinated with the PSD to minimize any potential effects on police services.

Level of Significance: Potentially significant

Mitigation Measures:

SERV-3: The ODS shall pay Public Facility Fees to defray capital facilities costs associated with expanding law enforcement.

SERV-4: The ODS shall coordinate with PSD as required to establish adequate security and visibility of the construction site.

SERV-5: Project landscaping along the building exterior and parking areas shall be designed and maintained as required to facilitate adequate visibility to support law enforcement.

Significance After Mitigation: Less than significant

c) Schools Impacts. The project site is located within Lincoln Unified School District (LUSD) and near portions of the Stockton Unified School District (SUSD). Development of the project site will not generate new public school student demand or physically affect schools; students to be housed in the project will be single students without children. The project therefore will not have a significant effect on either the LUSD or the SUSD.

The proposed project will expand the availability and diversity of UOP student housing on campus. Impacts on the UOP Stockton campus would be beneficial. The project would involve no adverse effect in this issue area.

d) Parks Impacts. The project may contribute to the use of local public parks; students will occasionally use City parks for recreation. However, due to the volume of open space and recreational opportunity available on campus, this effect is expected to be small and less than significant.

The majority of student recreational needs are expected to be met on-site or on-campus. The proposed project site design includes open space, walkways and access to the Calaveras River as well as to the range of UOP recreational and athletic facilities located south of the River. UOP facilities available to students include a gym, sports fields, and swimming pool among others. Therefore, the proposed project would have a less than significant effect on parks.

e) Other Public Facilities Impacts. The proposed project may involve a minor increase in the use of local public facilities. However, the majority of student needs are anticipated to be met on-site or on-campus. Any potential demand on off-site facilities would be considered less than significant.



### 3.16 RECREATION

---

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?			✓	
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?				✓

## NARRATIVE DISCUSSION

### Environmental Setting

The proposed project site is located on the UOP campus, north of the Calaveras River and south of Brookside Drive. The project site is currently occupied by nine tennis courts and a parking area. The existing tennis courts are being replaced by a new tennis complex south of the Calaveras River, which is under construction. The Calaveras River is located directly south of the project site; a public pedestrian/bike path along the River is available to the UOP students as well as the larger Stockton community.

Brookside Field is a UOP facility located between Brookside Drive and the project site. Brookside Field is composed of two facilities: the west side is operated by UOP Athletics Department and the east side is operated by the UOP Recreational Department.

The west field is 2.7 acres of specialized turf used by the UOP woman's field hockey team and summer UOP field hockey camps. The field is rated for Division One college sports. The field hockey season runs August through the end of October, and practices are held daily during the season. The field is also utilized during the off-season for training and other college field hockey activities.

The east field is 2.0 acres known as the "recreation field". This recreational field is used for football, soccer, kickball and other intercollegiate and recreational UOP sports and is also available to club/community athletic teams. This field is heavily utilized by UOP students as well as by the Stockton community year-round. The field is lighted, generally operates five days a week and is also utilized for seasonal weekend athletic tournaments.

UOP is in the process of consolidating its primary sports facilities in the area south of the River on the site of the former Stagg football stadium. New facilities being developed in this area will consist of a soccer stadium, tennis complex, pool and related facilities.

## Environmental Impacts and Mitigation Measures

a) Increased Use of Existing Recreational Facilities. The proposed project would demolish nine existing tennis courts. These existing facilities are being replaced by comparable facilities on the UOP campus south of the Calaveras River. The project would involve no physical effect on the adjoining Brookside Field facilities.

Development of proposed student housing would add to existing use of UOP recreational facilities by on-campus residents, including the adjacent Brookside Field facilities. UOP does not expect recreational demands generated by the project to significantly affect use of existing recreational facilities.

The project would not add significantly to demand on off-campus recreational facilities. The majority of new resident recreational needs are expected to be met on-site. The proposed project will include a variety of recreational opportunities for future residents. The project site includes open space, walkways and access to Calaveras River. Project residents would also have access to the range of on-campus recreational facilities south of the Calaveras River, including a gym, sports fields, swimming pool and a variety of open spaces for passive and active recreational use. The project will not have a significant effect on the use, or contribute to deterioration, of existing community parks. The project's effect in this issue would be less than significant.

b) Recreational Improvements Involving Environmental Impacts. The proposed project would develop student housing and planned outdoor spaces for recreation, study and social use by students and UOP guests. The potential environmental impacts of these improvements are addressed in this document. The project would not involve any other recreational facilities or potential environmental effects associated with recreational facilities other than those reported in this document for the project as a whole.

### 3.17 TRANSPORTATION/TRAFFIC

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?			✓	
b) Conflict with an applicable congestion management program, including but not limited to level of service standards and travel demand measures, or other standards established by the county congestion				✓

management agency for designated roads or highways?

c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

d) Substantially increase hazards to a design feature (e g., sharp curves or dangerous intersections) or incompatible uses (e g, farm equipment)?

e) Result in inadequate emergency access?

f) Conflict with adopted policies, plans or programs regarding public transit, bicycle or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

			✓
			✓
			✓
			✓

## NARRATIVE DISCUSSION

During the preparation of this IS/MND, KD Anderson & Associates (KDA) was retained to prepare a detailed study of the traffic and parking effects of the project as described in Chapter 2.0 of this document. The traffic and parking study is documented in the KDA report *Traffic Impact Study for the University of the Pacific Student Housing Project, Stockton, California*, which is shown in its entirety in Appendix E of this document.

This section of the IS/MND provides an overview of the background information, methodology and relevant results of the TIS; additional information on the TIS is presented in the Appendix. In brief, the TIS presents KDA's analysis of the project's effects on seven intersections, and seven roadway segments under five scenarios, including:

- Existing Conditions,
- Near-Term Future Existing Plus Approved Projects (EPAP), No UOP Student Housing Project Conditions,
- Near-Term Future EPAP Plus UOP Student Housing Project Conditions,
- Long-Term Future Cumulative No UOP Student Housing Project Conditions, and
- Long-Term Future Cumulative Plus UOP Student Housing Project Conditions.

The "EPAP" scenario represents a combination of existing traffic levels with the addition of traffic that would be generated by approved but unconstructed development projects. Long-term future background conditions are based on the City of Stockton General Plan. The TIS also included an analysis of project-related impacts on:

- Parking supply and demand,
- Availability of and demand for public transit services,
- Availability of and demand for bicycle and pedestrian facilities, and
- Site circulation and access.

The traffic effects of the project were analyzed using Level of service (LOS) as a basis for describing traffic conditions and impacts. Level of service measures the quality of traffic flow and is represented by letter designations from A to F, with a grade of A referring to the best conditions, and F representing the worst conditions. The characteristics associated with the various LOS for roadway segments and intersections are shown in Tables 1 and 2 of Appendix E.

The TIS also considered the lengths of vehicle queues with and without the project using methods presented in the Highway Capacity Manual 2000 and the City of Stockton Transportation Impact Analysis Guidelines and whether the unsignalized study intersections will meet “warrants” for signalization as defined by the California Manual on Uniform Traffic Control Devices 2014 Edition (MUTCD) (California Department of Transportation 2014).

In this IS/MND, the significance of the proposed project’s impact on traffic operating conditions is based on a determination of whether resulting LOS is considered acceptable. A project’s impact on traffic conditions is considered significant if implementation of the project would result in LOS changing from levels considered acceptable to levels considered unacceptable, or if the project would substantially worsen already unacceptable LOS.

To determine the significance of traffic effects, existing and predicted future LOS levels were compared to City of Stockton standards described in its Transportation Impact Analysis Guidelines (City of Stockton 2003):

Intersections and roadway segments operating at LOS A, B, C or D are considered acceptable, while those operating at LOS E or F conditions are considered unacceptable.

A significant traffic impact results when the project would cause an intersection that would otherwise function at LOS D or better without the Project to function at LOS E or F.

A significant traffic impact would also result when the project would cause average traffic delay at an intersections operating at LOS E or F conditions without the project increase by more than 5 seconds.

Portions of the City’s guidelines do not specifically address significance thresholds for roadway segments. The above-described standards are used for analysis of roadway segments. Because seconds of delay cannot be identified along a roadway segment, if a roadway segment operates at LOS E or F without the project, significance is defined by a project-related increase of more than 5% in traffic volume.

Although the City’s general standard is LOS D or better, the Stockton General Plan defines several exceptions, that is LOS levels worse than D that are considered acceptable at certain locations. Exceptions that are potentially applicable to the project include:

Pacific Avenue, Harding Way to Castle Drive and Alpine Avenue to the Calaveras River – LOS F

Pershing Avenue, I-5 to Brookside Road – LOS F

Consequently, an LOS F standard was applied to the following study facilities in the TIS:

Intersection of Brookside Road & Pershing Avenue,  
Intersection of Pershing Avenue & Alpine Avenue / Larry Heller Drive,  
Intersection of Pershing Avenue & Mendocino Avenue,  
Roadway segment of Pershing Avenue over the Calaveras River,  
Roadway segment of Pacific Avenue south of Brookside Road, and  
Roadway segment of Pershing Avenue south of Alpine Avenue / Larry Heller Drive.

## Environmental Setting

### Streets and Intersections

The TIS provides a detailed description of existing roadways and traffic conditions in the project vicinity area. The description is based on field observations, traffic count data collected for the TIS, the City of Stockton General Plan Background Report and other data available from local and state agencies. The roadways considered in the TIS (Figure 3-5) included:

Brookside Road, an east-west two-lane collector roadway located immediately north of the project site. Brookside Road is signalized at its intersection with Pershing Avenue and unsignalized at its intersection with Pacific Avenue. The posted speed limit is 35 miles per hour (mph) in the vicinity of the project.

Pershing Avenue, a four-lane north-south arterial roadway is located immediately west of the project site. Pershing Avenue is designated an arterial roadway (City of Stockton 2007a). In the vicinity of the project Pershing Avenue is signalized at Rose Marie Lane, Brookside Road and Alpine Avenue. The posted speed limit is 35 mph in the vicinity of the project.

Pacific Avenue, a four-lane north-south arterial roadway, is located east of the project. In the vicinity of the project Pacific Avenue is signalized at March Lane, Bianchi Road and Fulton Avenue. The posted speed limit is 30 mph in the vicinity of the project site.

Alpine Avenue is a discontinuous east-west collector roadway extending west from Pershing Avenue and east from Pacific Avenue. In both sections, Alpine is a four-lane road with a 35 mph speed limit, a collector west of UOP and an arterial east of UOP. Between Pacific and Pershing Avenues, Alpine Avenue is a two-lane street with 35 mph speed limit. This portion of Alpine Avenue is designated an arterial roadway (City of Stockton 2007a).

Mendocino Avenue is a discontinuous east-west roadway; the portion along the southern UOP boundary is a four-lane arterial roadway with a 35 mph speed limit.

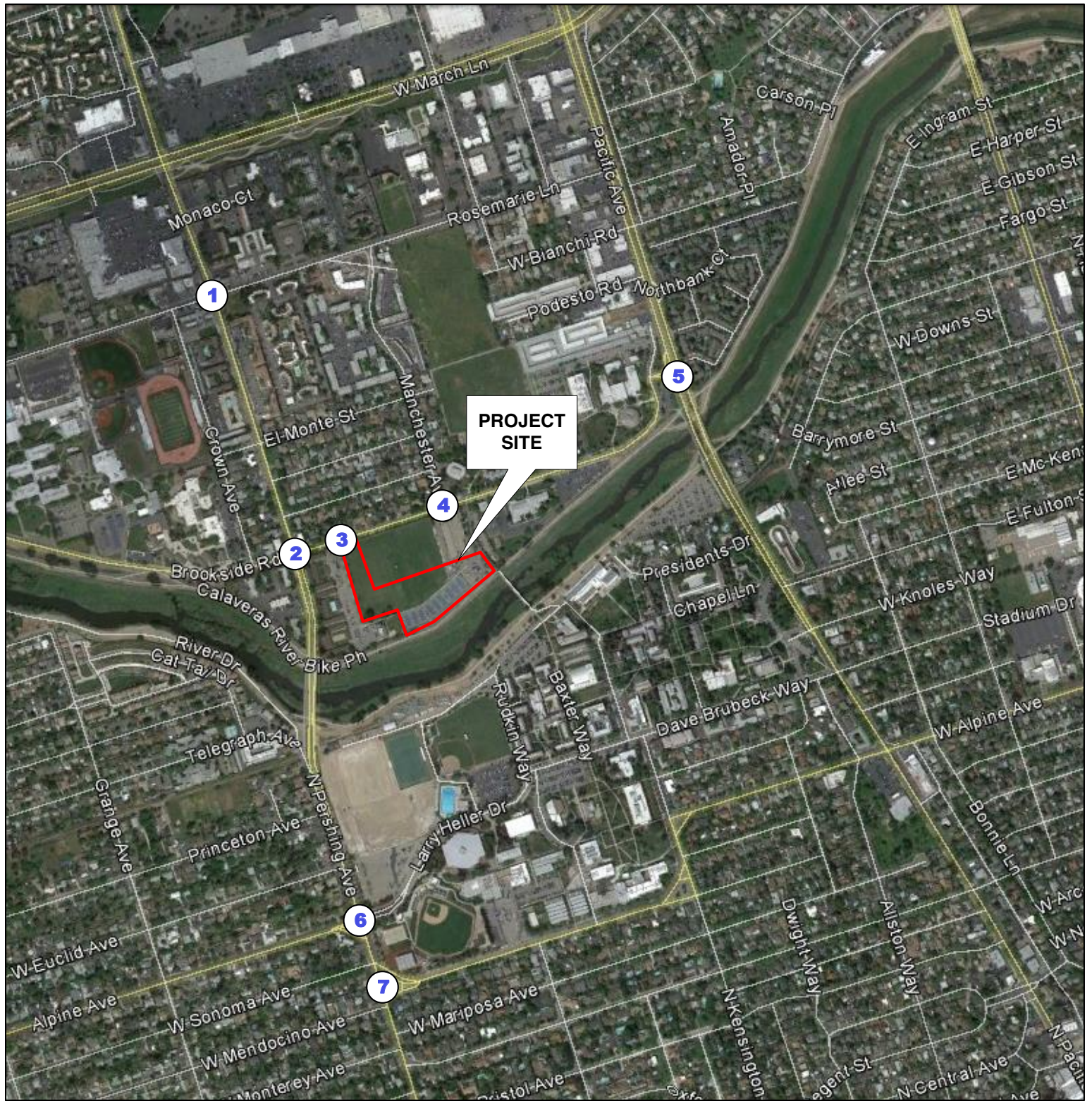
Larry Heller Drive provides direct access to the UOP campus from the intersection of Pershing Avenue and Alpine Avenue. Larry Heller Drive near Pershing is a four-lane collector roadway with a posted speed limit of 15 mph. Further within the campus, the street is a two-lanes wide local roadway.

March Lane is a major east-west arterial, which is six lanes wide in the project vicinity with a posted speed limit of 40 mph. March Lane is signalized at Pershing Avenue and Pacific Avenue, as well as other locations between the two arterials.

The TIS considered existing and projected future traffic at the intersections listed below, with and without the project. The locations of study intersections are presented in Figure 3-6.

Pershing Avenue & Rose Marie Lane  
Brookside Road & Pershing Avenue  
Brookside Road & University Townhouse Apartments Driveway  
Brookside Road & Manchester Avenue  
Brookside Road & Pacific Avenue  
Pershing Avenue & Alpine Avenue / Larry Heller Drive  
Pershing Avenue & Mendocino Avenue





Source: KD ANDERSON

NOTE: Site boundary includes additional area addressed in traffic and parking study.







The TIS contains a detailed description of the results of LOS analysis of the streets and intersections in the vicinity of the project under the above-listed scenarios. Under Existing conditions, all of the seven study roadway segments operate at acceptable LOS. Five of the seven segments operate at LOS D or better. Segments of Pacific and Pershing Avenues operate at LOS E, but LOS E is considered by the City of Stockton to be acceptable along these segments, and no improvements to these segments are needed.

Under Existing conditions, all of the seven study intersections operate at acceptable LOS during both the a.m. and p.m. peak hours. Six of the seven study intersections operate at LOS D or better. The intersection of Brookside Road and Pershing Avenue operates at LOS E during peak hours, but LOS E is considered by the City of Stockton to be acceptable at this intersection. No improvements are needed at the study intersections.

Although the intersection of Brookside Road and Pershing Avenue functions at an acceptable level, a long westbound queue develops at the intersection during the p.m. peak hour that extends beyond Manchester Avenue, a distance of more than 1,000 feet. This is the result of inadequate “green time” in the signal timing for the westbound approach. As a result, the vehicle queue increases incrementally during each signal cycle. In order to correct this existing condition, the signal timing or the intersection lane configurations should be modified. A detailed analysis of this situation is provided in the TIS, Appendix E.

The City of Stockton is planning to install an Adaptive Traffic Control System (ATCS) at 16 signalized intersections along the Pershing Avenue corridor, including the intersection of Brookside Road and Pershing Avenue. The ATCS project is fully funded (Chitsazan pers. comm.). The ATCS project would replace and upgrade signal control systems at intersections along the Pershing Avenue corridor. Implementation of the ATCS project would improve traffic operations at this intersection and, based on the preliminary assessment of queuing, would be expected to increase the capacity of the westbound approach and reduce existing queuing concerns.

The existing lane configuration on the westbound approach also contributes to queuing concerns. A single through/left-turn lane must accommodate more than 90% of the westbound traffic through the intersection. Changing the westbound approach to provide an exclusive left-turn lane and a westbound combined through/right-turn lane would distribute vehicles more evenly between the two approach lanes, and allow more efficient use of the westbound green time, which would also reduce vehicle delay and the length of the westbound queue.

### Public Transportation

The San Joaquin Regional Transit District (SJRTD) is the primary provider of public transportation service in San Joaquin County. SJRTD provides fixed-route, flexible fixed-route, and dial-a-ride services in Stockton as well as other inter-city and interregional services. Several SJRTD fixed-route lines serve the UOP vicinity; principal lines serving the UOP vicinity are listed below. A detailed diagram showing SJRTD lines near UOP is shown in Appendix E.

Route 4, Metro Hopper Service, travels on Pacific Avenue and has a transfer point on the UOP campus.

Route 40, Metro Express, travels on Pacific Avenue and has a transfer point on the UOP campus. Route 40 provides Bus Rapid Transit service between Hammer Lane and the downtown transit center.

Route 23, travels on Pacific Avenue with transfer point at Pacific Avenue and Yokuts Avenue.

Route 61, travels on Pershing Avenue and has a transfer point at the intersection of Pershing Avenue and Brookside Road.

Route 80 travels on Pershing Avenue and has a transfer point at the intersection of Pershing Avenue and Brookside Road.

### On-Campus Parking

UOP provides a range of on-campus parking lots (see Appendix E, Figure 4) that are, in general, heavily utilized. No quantitative utilization data are available for these parking facilities. However, UOP Public Safety (Panos pers. comm.) indicates all except one of the parking lots are full, or near to full, at some time during the day on most school days. The one exception is Lot 1, located on the northeast corner of Pershing Avenue and Larry Heller Drive.

Lot 1 serves nearby existing athletic facilities and in the future will serve additional athletic facilities adjacent to and north of lot 1. While lot 1 is not full on the large majority of school days, it is heavily-used at nighttime during athletic events. Completion and use of additional athletic facilities north of lot 1 would increase demand for parking at this facility.

UOP has available a range of on-campus parking facilities in the vicinity of the project site, including the facilities listed below.

Lots 14 and 29, 159 spaces, located immediately west of the project site, serve the University Townhouse apartment complex and the Theta Chi fraternity house. Peak use of these lots is at night. Estimated daytime usage is about 30%. Nighttime usage was counted during Fall semester 2015 at approximately 42%, consistent with a 2012 count that found 37% usage.

Lots 13 and 18, 86 spaces, located at the foot of the UOP bridge, serve UOP faculty and staff and requires a UOP “B” permit. These lots are used primarily during the daytime, with very little nighttime use. In Fall 2015 counts, morning occupancy was about 90-95% and roughly 75% in the afternoon. In these lots, less than 10% of the spaces were occupied during a 10:00 p.m. count.

Under an informal agreement, the adjacent Church of Jesus Christ of Latter-day Saints (LDS) allows UOP-related vehicles to park in the church parking lot on weekdays (Panos, pers. comm.). The LDS church parking lot provides 282 parking spaces. Fall 2015 observations found the LDS lot approximately 75 percent full at 3:45 p.m. and approximately 50 percent full at 4:05 p.m. The LDS lot was observed to have little overnight use.

### Off-Campus Parking

Off-campus parking is available along the public streets that surround the campus, and this parking supply is utilized by UOP faculty and staff. North of the campus, use of available on-street parking is unrestricted. On-street parking is available along the north side of Brookside Road and both sides of Churchill Street, Downs Street and Manchester Avenue. KDA conducted observations during August 2015, when UOP was not in session, and September 2015 when UOP was in session. When UOP was not in session, KDA observed that approximately 10-20% percent of the on-streets spaces were occupied. When UOP was in session, KDA observed that

80-90% of the on-street spaces were occupied in the early afternoon. Occupancy dropped to about 50% after 4:00 p.m. KDA observations indicated that much of the on-street parking use when UOP was in session, were observed to be primarily associated with the UOP physical plant facilities, the UOP Department of Public Safety (Public Safety) , and the Cowell Wellness Center. Public Safety has received verbal complaints from residents of the neighborhood regarding UOP-related vehicles occupying on-street parking during the daytime, preventing parking in front of residences (Panos pers. comm.).

Nighttime parking rates were in the 10-20% range under both conditions. Because student parking tends to peak at night, the low occupancy level indicates little, if any, overnight on-street parking by students.

In the Caldwell Village area south of the campus, the City in cooperation with UOP adopted a residential parking permit program. Under this program, residents with permits are entitled to use the available on-street spaces with no restrictions. Non-permitted vehicles are limited to two hours, from 7:00 a.m. to 6:00 p.m., on UOP school days. Enforcement is provided by both the City Police Department and UOP Public Safety. The program thereby limits long-term (all-day) parking by non-residents. The program is described in more detail in the KDA TIS and Stockton Municipal Code Chapter 10.40, Residential Parking Permits.

UOP proposes to work with the City of Stockton to institute a similar permit system in the residential neighborhood north of the campus. Institution of a permit system is also recommended by KDA in its TIS of the project (Appendix E).

#### Other Transportation Services

Commute Connection is a Regional Rideshare Agency and a program of the San Joaquin Council of Governments (SJCOG) that helps commuters transition from driving alone to ridesharing options such as carpooling, vanpooling, bicycling/walking or riding transit.

Park and Ride lots provide free parking facilities for commuters to facilitate use of carpools, transit, and vanpools. There are several Park and Ride lots in the Stockton area, none within the immediate vicinity of the project.

The City of Stockton has an extensive network of bicycle facilities, including off-street trails and paths and on-street bicycle lanes and routes. In the vicinity of the project site, existing Class I bicycle facilities are located along the Calaveras River and March Lane. Existing Class III bicycle facilities are present on Pershing Avenue north of Alpine Avenue, Alpine Avenue west of Pershing Avenue, and Kensington Way from UOP to south of Harding Way; other future Class II bicycle facilities are planned to be located in the UOP vicinity. A map of existing and planned facilities is shown in Appendix E.

An existing dedicated bicycle and pedestrian (and light maintenance vehicle) bridge over the Calaveras River connects the project site with the main portion of the UOP campus south of the river. This bridge is an important connection for all UOP on-campus residents north of the river. Sidewalks are present on both sides of Brookside Road, Pershing Avenue and Pacific Avenue in the vicinity of the project site.

## Environmental Impacts and Mitigation Measures

a) Consistency with Applicable Plans, Ordinances and Policies. The KDA TIS included analysis of the potential traffic effects of the project as well as potential effects on other modes of transportation including transit and pedestrian and bicycle facilities. The project would result in less than significant effects in all of these potential issue areas. The KDA analysis is summarized below.

The KDA TIS analyzed the potential traffic effects of the project on roadway segments and intersections under Existing Plus Approved Project (EPAP) and Cumulative baseline conditions. A summary of impacts under the EPAP and Cumulative analysis scenarios is shown on Tables 3-3, 3-4, 3-5 and 3-6 and summarized below. A detailed description of the traffic analysis and results is provided in Appendix E. The project would have less than significant effects in each of the scenarios analyzed and would therefore be consistent with applicable traffic-related plans, ordinances and policies.

### Traffic Impacts Under EPAP Conditions

Under EPAP baseline (EPAP No Project) conditions, the KDA TIS finds that all of the study intersections and six of the seven study roadway segments would operate at an acceptable LOS. No improvements to the facilities are needed under EPAP Baseline conditions.

One roadway segment would experience operating conditions that are considered unacceptable. As shown in Table 3-3, Pershing Avenue north of Brookside Road would operate at LOS E under EPAP No Project conditions. LOS E is considered to be unacceptable by the City of Stockton; this segment is not exempt from the City's LOS D standard. Widening is needed to improve LOS to acceptable levels, but right-of-way needed for widening is not available, and existing structures adjacent to or near to the existing right-of-way limit widening potential. As a result, widening of this segment is not considered feasible, and operating conditions on this segment will remain unacceptable regardless of whether or not the project is constructed. Under EPAP Plus Project conditions, six of the seven study roadway segments would continue to operate at an acceptable LOS. The project would have a less than significant effect on traffic operations along these segments. No mitigation measures are required.

Under EPAP Plus Project conditions, Pershing Avenue north of Brookside Road would continue to operate at an unacceptable LOS E, as it would under EPAP No Project conditions. The project would add a relatively small amount of traffic to this roadway segment but would not result in a degradation of LOS or cause a significant increase in traffic. As a result, the project would have a less than significant effect on traffic operations along this roadway segment. No mitigation measures are required.

Project development (EPAP Plus Project conditions) would add relatively small amounts of traffic to the study intersections and roadway segments. Under EPAP Plus Project conditions, traffic delay would be slightly increased at all of the study intersections, but increases in delay would not be significant, and the intersections would continue to operate at an acceptable level. The project would have a less than significant effect on intersection operations under EPAP Plus Project conditions. No mitigation measures are required.

TABLE 3-3  
ROADWAY SEGMENT VOLUME, VOLUME/CAPACITY RATIO AND LEVEL OF SERVICE  
EPAP CONDITIONS

Roadway Segment	Number of Lanes	Daily Capacity	No Project			With Project		
			Daily Volume	V/C Ratio	Level of Service	Daily Volume	V/C Ratio	Level of Service
1 Pershing Avenue North of Brookside Road	4	38,200	33,308	0.87	E	33,462	0.88	E
2 Brookside Road Pershing Avenue to Pacific Avenue	2	13,200	5,228	0.40	A	5,470	0.41	A
3 Pershing Avenue Over the Calaveras River	4	38,200	35,231	0.92	E	35,391	0.93	E
4 Pacific Avenue South of Brookside Road	4	38,200	35,298	0.25	E	35,472	0.93	E
5 Alpine Avenue West of Pershing Avenue	4	36,300	9,182	0.25	A	9,216	0.25	A
6 Larry Heller Drive East of Pershing Avenue	2	13,200	3,248	0.25	A	3,272	0.25	A
7 Pershing Avenue South of Alpine Avenue / Larry Heller Drive	4	38,200	33,854	0.89	E	33,950	0.89	E

TABLE 3-4  
INTERSECTION DELAY AND LEVEL OF SERVICE  
EPAP CONDITIONS

			EPAP No Project				EPAP With Project			
			AM Peak		PM Peak		AM Peak		PM Peak	
Study Intersections	Inter. Control	Signal Warrant Met?	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
1 Pershing Avenue & Rose Marie Lane	Signal		B	17.1	B	19.7	B	17.1	B	19.7
2 Brookside Road & Pershing Avenue	Signal		D	46.1	D	49.5	D	47.2	D	52.5
3 Brookside Road & University Townhouse Apartments Driveway	Unsig	No	A	0.2	A	0.5	A	0.5	A	1.1
4 Brookside Road & Manchester Avenue	Unsig	No	A	1.5	A	1.6	A	1.6	A	1.6
5 Brookside Road & Pacific Avenue	Unsig	Yes	A	3.4	A	1.8	A	3.5	A	1.9
6 Pershing Avenue & Alpine Avenue/Larry Heller Drive	Signal		B	15.4	C	20.3	B	15.4	C	20.3
7 Pershing Avenue & Mendocino Avenue	Unsig	Yes	A	2.8	A	9.0	A	2.8	A	9.1

### Traffic Impacts Under Cumulative Conditions

Under Cumulative No Project conditions, all of the study intersections and segments would operate at an acceptable LOS. No improvements are projected to be needed under Cumulative No Project conditions.

The analysis of cumulative future traffic conditions considered project future traffic on project area roadway segments and intersections. Because the project area is generally built-out with little vacant land, the traffic model used to forecast traffic volumes assumes that future land use development in the area will be limited and does not forecast large increases in traffic under Cumulative No Project conditions. In general, the model forecasts north-south traffic volumes in the area to increase by approximately 4-10%. In general, the model forecasts changes in east-west traffic volumes ranging from a decrease of nine percent of an increase of 20 percent.

Under Cumulative Plus Project conditions, the project would involve relatively small increases in traffic at all of the study facilities. These changes are illustrated on Tables 3-5 and 3-6. However, the LOS at all of these facilities would be unchanged and would remain at an acceptable level. The project would have a less than significant effect on study intersections and roadway segments under Cumulative conditions. No mitigation measures are required.

### On-Campus Parking Impacts

Project development would provide an additional 381 beds of on-campus student housing and would thereby increase the demand for on-campus parking. KDA projected additional parking demand based on available demand data, including parking lot usage counts at existing UOP residential facilities as summarized above and described in detail in Appendix E. On the basis of this information, KDA estimated parking demand associated with the project at 0.60 parking spaces per occupied bed. Project demand combined with existing parking demand from the University Townhomes and Theta Chi fraternity house would amount to 302 spaces.

The project proposes expansion and restriping of the existing University Townhomes/Theta Chi parking area, which will result in a total of 314 parking spaces. As a result, the project is expected to result in a surplus of 12 parking spaces and will have a less than significant effect on on-campus parking. No mitigation measures are required.

### Off-Campus Parking Impacts

The proposed project is not expected to result in an effect on off-campus parking. The project will result in a reduction in "B" permit parking spaces at Lot 13; parking demand accommodated by Lot 13 will be met by other existing on-campus parking facilities. Elimination of the Lot 13 spaces might involve an indirect effect on the usage of on-street parking in the residential area north of the campus, however a significant effect is not anticipated. Long-term usage of the available on-street spaces will be prevented by planned institution of a parking permit system for this area.

### Transit Impacts

The project would result in an increase in demand for public transit service. The project site is served by five public transit routes operated by SJRTD. The frequency and proximity of existing transit service is considered adequate to serve the expected increase in demand for transit service. Therefore, the project would have a less than significant effect on transit services. No mitigation measures are required.



TABLE 3-5  
ROADWAY SEGMENT VOLUME AND VOLUME/CAPACITY RATIO  
CUMULATIVE CONDITIONS

Roadway Segment	Number of Lanes	Daily Capacity	Cumulative No Project			Cumulative With Project		
			Daily Volume	V/C Ratio	Level of Service	Daily Volume	V/C Ratio	Level of Service
1 Pershing Avenue North of Brookside Road	4	38,200	32,147	0.84	D	32,292	0.85	D
2 Brookside Road Pershing Avenue to Pacific Avenue	2	13,200	5,489	0.42	A	5,729	0.43	A
3 Pershing Avenue Over the Calaveras River	4	38,200	35,069	0.92	E	35,243	0.92	E
4 Pacific Avenue South of Brookside Road	4	38,200	35,568	0.92	E	35,736	0.94	E
5 Alpine Avenue West of Pershing Avenue	4	36,300	8,959	0.25	A	8,979	0.25	A
6 Larry Heller Drive East of Pershing Avenue	2	13,200	3,222	0.24	A	3,246	0.25	A
7 Pershing Avenue South of Alpine Avenue / Larry Heller Drive	4	38,200	35,611	0.93	E	35,733	0.94	E

TABLE 3-6  
INTERSECTION DELAY AND LEVEL OF SERVICE  
CUMULATIVE CONDITIONS

			Cumulative No Project				Cumulative With Project			
			AM Peak		PM Peak		AM Peak		PM Peak	
Study Intersections	Inter. Control	Signal Warrant Met?	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
1 Pershing Avenue & Rose Marie Lane	Signal		B	18.9	C	21.6	B	18.9	C	21.6
2 Brookside Road & Pershing Avenue	Signal		D	50.9	E	56.3	D	52.1	E	59.7
3 Brookside Road & University Townhouse Apartments Driveway	Unsig	No	A	0.2	A	0.4	A	0.5	A	1.1
4 Brookside Road & Manchester Avenue	Unsig	No	A	1.6	A	1.6	A	1.7	A	1.7
5 Brookside Road & Pacific Avenue	Unsig	Yes	A	3.6	A	1.8	A	3.7	A	1.9
6 Pershing Avenue & Alpine Avenue/Larry Heller Drive	Signal		B	14.0	B	19.0	B	14.0	B	19.1
7 Pershing Avenue & Mendocino Avenue	Unsig	Yes	A	5.9	D	26.9	A	6.0	D	27.3

### Bicycle and Pedestrian Facilities Impacts

The project would result in an increase in demand for bicycle and pedestrian facilities. The project site and area are currently served by a network of bicycle and pedestrian facilities, including facilities adjacent to the project site. The increase in demand for bicycle and pedestrian travel is expected to be adequately served by existing facilities. Therefore, the project would have a less than significant effect on bicycle and pedestrian facilities. No mitigation measures are required.

### Site Circulation Impacts

KDA reviewed proposed project site circulation and access as a part of the TIS, addressing a wide range of potential concerns detailed in Appendix E. No substantial concerns were identified in this analysis. Proposed site circulation and access is considered to be adequate, and potential impacts would be less than significant. No mitigation measures are required.

b) Conflict With Congestion Management Program. The project would not involve any known conflicts with applicable Congestion Management Programs. The project would not involve significant level of service effects on CMP facilities or conflicts with applicable transportation standards.

c) Impact on Air Traffic Patterns. The project would have no effect on airport facilities or air traffic patterns. The project site is located in an existing developed area and well outside the planning boundary for the Stockton Metropolitan Airport.

d,e) Traffic Hazards, Emergency Access. The project would not involve any known increase in transportation hazards. Proposed site circulation has been reviewed KDA and found to be adequate. The KDA analysis included consideration of emergency access; emergency access is provided along the north and south sides of the proposed student housing building.

f) Conflict with Non-vehicular Transportation Plans. The KDA analysis considered potential impacts on transit, bicycle and pedestrian facilities and plans and identified no conflicts between the project and these plans.

## **3.18 UTILITIES AND SERVICE SYSTEMS**

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?			✓	
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			✓	
c) Require or result in the construction of new stormwater drainage facilities or expansion of existing			✓	

facilities, the construction of which could cause significant environmental effects?

d) Are sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

e) Has the wastewater treatment provider which serves or may serve the project determined that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

f) Is the project served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

g) Comply with federal, state and local statutes and regulations related to solid waste?

		✓	
		✓	
		✓	
		✓	

## NARRATIVE DISCUSSION

### Environmental Setting

Wastewater collection and treatment services in the project area and throughout the City are provided by the City of Stockton. Wastewater treatment for the City as a whole is provided at the City's Regional Wastewater Control Facility (RWCF) located on Navy Drive, south of the site. The RWCF processes approximately 32 million gallons of wastewater daily (MGD); RWCF capacity is estimated at 48 MGD. The RWCF provides tertiary-level treatment and is operated pursuant to Waste Discharge Requirements issued by the Regional Water Quality Control Board, Central Valley Region (NPDES Permit No. CA0079138). The RWCF has met and is expected to continue to meet wastewater treatment demands in compliance with its NPDES permit (Mintier and Associates, 2008).

The project site is located within and served by City Sewage Collection System No. 3. A 10-inch gravity main is located in Brookside Road. An 8-inch gravity main extending along the existing University Townhomes driveway from Brookside Road provides service to the immediate vicinity of the site.

The 10-inch main in Brookside Road flows to a wastewater trunk line at Crown Avenue, west of Pershing Avenue, which flows south to the RWCF. This trunk line crosses under the Calaveras River that is presently surcharged during peak flows. The City has recognized and is addressing limitations on the capacity of this line with a proposed improvement to be completed during the summer of 2017. As presently planned, the existing line will be replaced with three siphon lines and an air jumper line. Line sizes will be determined during the design process; the completed facility will be sufficient to meet UOP needs and accommodate wastewater demand generated from surrounding urban development. The existing siphon will be abandoned in place or placed into auxiliary uses. This \$2.0 million facility is listed in the City's Wastewater CIP as Sanitary Sewer System Repair project #86 (Stagg, Khloth, pers. comm.).

Water supply, storage and distribution services in the project area and most of central Stockton is provided by California Water Service Company (Cal Water); the Cal Water system is operated in conjunction with the City system that supplies the remainder of the City and vicinity. An existing 8-inch Cal Water main is located in Brookside Road, and a 6-inch line extends to the immediate vicinity of the project site along the existing University Townhomes driveway.

With completion of the Delta Water Supply Project and other recent improvements to the City system, the City's water supply will meet anticipated water needs beyond buildout of the City's Sphere of Influence. The DWSP does now and will continue to reduce the city's dependence on groundwater and ensure that water quality standards are maintained. Groundwater is not considered a long-term supply and will only be used only in dry and critical years, when surface water supplies are curtailed (Mintier and Associates, 2008).

Storm water collection and disposal service for the project site is provided by the City of Stockton; the project site is within the Calaveras River drainage area and is adjacent to the River. A 30- to 36-inch storm drain line is located within Brookside Road; this line flows west to an existing pump station adjacent to Brookside Road west of Pershing Avenue near Stagg High School. The pump station has a number of lines that exit the facility to discharge the storm water into the nearby Calaveras River. A 12-inch line extends from Brookside Road to the immediate vicinity of the project site along the existing University Townhomes driveway.

Electrical, telephone, and cable utilities are located adjacent to or near the site. Existing electrical and communication feeder lines are located in the roadway north of the pedestrian bridge; electrical lines extend west through the project site to the University Townhomes. Existing PG&E gas facilities are located in Brookside Road.

Commercial solid waste collection and disposal in Stockton is provided by franchise haulers that transport waste material to commercial recyclers and/or the Forward Landfill facility on Austin Road. There is no shortage of landfill space available to waste haulers servicing the City; plans to expand the existing landfill facilities have been approved.

UOP operates a robust solid waste recycling system that captures and separates recyclables from general refuse and captures and directs kitchen and green waste to existing composting operations. Development projects are required by City ordinance to recycle at least 50% of construction and demolition debris; a final disposal and recycling report must be submitted to the City within 14 days of job completion.

## **Environmental Impacts and Mitigation Measures**

a, e) Effects on Wastewater Systems. The project would involve an increase in wastewater generation; these flows are within the existing available treatment capacity of the Stockton RWCF and would not affect the City's ability to operate the RWCF in accordance with Waste Discharge Requirements. Required wastewater connection fees would fund the project's proportionate share contribution to the need for future RWCF improvements. The project would have a less than significant effect on RWCF wastewater treatment or City compliance with RWQCB requirements.

b) Effects on Water Systems. Water service in the project area is provided by Cal Water. The Stockton Municipal Services Review (Mintier and Associates, 2008) and Cal Water indicate that sufficient water supply is available to serve the project, and existing water lines in the area are sized to adequately serve the project. No significant impacts on water services are anticipated. Project design and construction will need to be coordinated with Cal Water.

Project-generated wastewater would be discharged to existing wastewater collection lines adjacent to the project site. In the vicinity of the project site, these existing lines are sized to handle projected wastewater flows; the project would have a less than significant effect on these facilities.

Local wastewater collection lines drain to an existing inverted siphon crossing of the Calaveras River, which is presently surcharged during peak flows; the addition of wastewater flow from the project would exacerbate this condition. The City is preparing to improve this facility and anticipates improvements to be completed in the summer of 2017, ahead of planned occupancy of the project. As a result, wastewater generated by the project will be adequately accommodated by the City wastewater collection system, and the project's effect on the wastewater collection would be less than significant.

Project improvement plans will be required to address the adequacy of the wastewater collection and any improvements to that system that will be needed to accommodate the project. ODS will be required to submit an analysis of project wastewater demands and collection system capacity in conjunction with review and approval of project improvement plans. The City will require the incorporation of necessary improvements into the project; as a result the project will have a less than significant effect wastewater collection facilities.

c) Effects on Stormwater Systems The project site is presently developed, project site drainage facilities are currently connected and contributing storm drainage to the City of Stockton storm drainage system described above. The southern portion of the project site is covered with impervious surfaces, primarily the concrete surfaces of the existing tennis court and pavement of Lot 13 at the UOP Physical Plant. The project would involve the demolition of these existing runoff sources and their replacement with other impervious area for a net increase of approximately 12,000 square feet and an increase in runoff of about 500 cubic feet during a design storm. The incorporation of storm water best management practices, to be reviewed and approved by the City Engineer, would prevent a significant increase in runoff, and the project would have a less than significant effect in this issue area.

The project will be subject to existing City storm water quality requirements as described in its *Storm Water Management Plan* and *Storm Water Quality Control Criteria Plan* (City of Stockton 2009). As discussed in Chapter 2 Project Description, the project will incorporate water quality and volume control requirements including grassy swales and bio-retention basins. These project features will provide compliance with the City's storm water quality permit standards and prevent any substantial increase in runoff discharged from the project site. These requirements are also discussed in Section 10 Hydrology and Water Quality.

Storm water quality controls are derived from the federal Clean Water Act National Pollutant Discharge Elimination System (NPDES) as administered by the California Regional Water Quality Control Boards (RWQCBs); Stockton is responsible locally for compliance with these requirements, which are discussed in more detail in Section 10 Hydrology and Water Quality.

Detailed site improvement plans including drainage system plans, storm water quality Best Management Practices and information on related off-site facilities, will need to be submitted to the City for review and approval by the MUD Director and the City Engineer prior to the approval of improvement plans. Storm water quality plans are subject to separate existing City review requirements as discussed in Section 10 Hydrology and Water Quality.

With the incorporation of these design features and review requirements, the project would involve a less than significant effect on runoff and storm drainage facilities. The project would

not require construction of storm drainage facilities that could cause significant environmental effects.

d) Water Supply. Water service in the project area is provided by Cal Water. The Stockton Municipal Services Review (Mintier and Associates, 2008) and Cal Water have indicated that sufficient water supplies are available to serve the project. Existing water lines in the area are sized to adequately serve the project, and no significant impacts on water services are anticipated. Project design and construction will need to be coordinated with Cal Water.

f, g) Solid Waste Effects. UOP is presently served by waste hauling services, and on-campus recycling programs are presently in place. As discussed above, landfill capacity is available to accommodate the solid waste disposal needs of the project. Project construction and operation will be subject to existing solid waste-related statutes and regulations, including City construction waste recycling requirements.

Project construction will involve the generation of substantial amounts of concrete and other waste resulting from demolition of the existing tennis courts and parking area. As required by City ordinance, these wastes will need to be diverted to commercial recycling facilities. At least 50% of these materials must be recycled.

Solid waste generated by the project will be source-separated and collected consistent with existing practices at UOP. Facility managers (Izmirian, pers. comm.) indicate that recycling activity at the project site will equal or exceed existing UOP efforts.

h) Regulated Utilities. Project effects on regulated utilities are not provided for in the CEQA checklist. Electrical, gas and communication utilities are presently available and adjacent to the site in the approach to the UOP footbridge. These utilities will be extended onto the site to serve the proposed project. An existing electrical feeder serving the Theta Chi house and the University Townhomes passes through the site and will need to be relocated in conjunction with the project; in addition, an existing transformer located south of the Calaveras River will need to be upsized to accommodate new electrical load generated by the project. Neither improvement will require additional land disturbance or potential for significant environmental effects. No other issues or concerns associated with provision of utility service have been identified. The project's effect on electric, gas and communications services will be less than significant.

### 3.19 MANDATORY FINDINGS OF SIGNIFICANCE

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California		✓		



history or prehistory?

b) Does the project have impacts that are individually limited, but cumulatively considerable? "Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?

c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

		✓	
			✓

## NARRATIVE DISCUSSION

Finding (a) is checked as "Less Than Significant With Mitigation Incorporated" on the basis of potential impacts on biological and cultural resources as described in Sections 3.4 and 3.5. These impacts would be reduced to less than significant with implementation of the mitigation measures described in those sections.

The cumulative impacts of development within the City of Stockton, including infill of vacant or under-utilized lands within the City and Sphere of Influence, have been addressed in the Stockton General Plan EIR (City of Stockton, 2007). The GPEIR identified several potentially significant cumulative effects, including impacts on biological resources, cultural resources, traffic, air quality, and utility and service systems, among others. The proposed project would involve a small potential contribution to some of these identified impacts. By and large, these contributions are small and involve no discernable change in the quantities of environmental effect identified in the GPEIR. This Initial Study prescribes mitigation measures for project contributions that are identified as potentially significant; with the required implementation of mitigation measures, these potential effects would be reduced to a less than significant level. None of these impacts would involve a cumulatively considerable to a significant cumulative effect, either in combination with other impacts associated with the project, or when considered in the context of the environmental impacts of other planned urban development.

The project's potential for potential adverse effects on human beings was considered during the preparation of this Initial Study. Other than the environmental effects discussed above, the proposed project would not involve potential direct or indirect adverse effects on human beings.

## 4.0 REFERENCES

### 4.1 DOCUMENT PREPARERS

---

This IS/MND was prepared by BaseCamp Environmental for use by and under the supervision of the City of Stockton Department of Community Development. The following persons were involved in preparation of the IS/MND:

City of Stockton Department of Community Development

Richard Larrouy  
Mike McDowell

BaseCamp Environmental

Charlie Simpson  
Amy Gartin  
Duffy Ruffin  
Krista Simpson

KDAnderson Transportation

Wayne Shijo

### 4.2 DOCUMENTS CITED

---

California Air Resources Board. Air Quality and Land Use Handbook: A Community Health Perspective. April 2005.

California Air Pollution Control Officers Association. Quantifying Greenhouse Gas Mitigation Measures: A Resource for Local Government to Assess Emission Reductions from Greenhouse Gas Mitigation Measures. August 2010.

California Air Resources Board. (Summary of) California Greenhouse Gas Emission Inventory – 2015 Edition. Information retrieved August 29, 2015: <http://www.arb.ca.gov/cc/inventory/data/data.htm>

California Air Resources Board. 2008. Climate Change Scoping Plan: A Framework for Change. December 2008.

California Department of Conservation, Division of Land Resource Protection. San Joaquin County Important Farmlands (map). 2012.

California Department of Conservation, Division of Land Resources Protection, Farmland Mapping and Monitoring Program. San Joaquin County Important Farmland 1998. 2000.

California Department of Conservation, Division of Mines and Geology. 1988. Mineral Land Classification of Portland Cement Concrete Aggregate in the Stockton-Lodi Production-Consumption Region. Special Report 160. 1988.

California Department of Finance. Report E-5 City/County Population and Housing Estimates, January 1, 2015.

City of Stockton. Background Report, Stockton General Plan 2035. December 2007.

City of Stockton. City of Stockton Climate Action Plan, August 2014.

City of Stockton. City of Stockton General Plan Update 2035. 2007.

City of Stockton. City of Stockton General Plan 2035 Final Environmental Impact Report (EIR 4-05). December 2007.

City of Stockton Habitat/Open Space Conservation Fee Program Map. August 2002.

City of Stockton. Municipal Code.

ESA. Environmental Impact Report, Stockton General Plan 2035 - Draft. December 1, 2006.

j.c. brennan & associates, inc. Environmental Noise Assessment. July 27, 2015.

Jensen. Genesis Society. Central California Information Center Data Base Search of Project Site. July 27, 2015.

Jennings, Charles W and Bryant, William A. 2010. Fault Activity Map of California. California Geological Survey, Geologic Data Map No. 6. 2010.

Kleinfelder, Inc. 2012. Public Review Draft Initial Study/Mitigated Negative Declaration for the University of the Pacific Calaveras River Housing Project. March 29, 2012.

Mintier and Associates. City of Stockton 2008 Municipal Service Review, Public Review Draft. July 23, 2008.

Mintier and Associates, Matrix Design Group, et. al. 2007. City of Stockton, Stockton General Plan 2035 Goals and Policies Report. December 2007.

Moore. Moore Biological Consultants. University of the Pacific Student Housing Project, Stockton, San Joaquin County, California: Preliminary Biological Resources Review. August 25, 2015.

San Joaquin County Flood Control and Water Conservation District. Groundwater Report. Spring 2015.

San Joaquin Valley Air Pollution Control District. Climate Change Action Plan. 2008.

Stockton Metro Airport Master Plan. 2009.

San Joaquin Valley Air Pollution Control District. 2015. Guide For Assessing and Mitigating Air Quality Impacts (GAMAQI). March 19, 2015.

Walker, Larry Associates. 2009. City of Stockton and County of San Joaquin, Final Stormwater Quality Control Criteria Plan. March 2009.

Walker, Larry Associates. 2008. City of Stockton Storm Water Management Plan. September 2008.

### 4.3 INTERNET SOURCES CITED

---

<http://gis.bam.water.ca.gov/bam/>. California Department of Water Resources, Best Available Floodplain Maps.

[http://www.consrv.ca.gov/cgs/geologic\\_resources/mineral\\_resource\\_mapping/Pages/Index.aspx](http://www.consrv.ca.gov/cgs/geologic_resources/mineral_resource_mapping/Pages/Index.aspx), August 1, 2015.

[http://www.conservation.ca.gov/cgs/information/geologic\\_mapping](http://www.conservation.ca.gov/cgs/information/geologic_mapping). State Geologic Mapping.

[http://www.consrv.ca.gov/cgs/geologic\\_resources/mineral\\_resource\\_mapping/Pages/Index.aspx](http://www.consrv.ca.gov/cgs/geologic_resources/mineral_resource_mapping/Pages/Index.aspx). State Mineral Resources Maps

<http://www.epa.gov/climatechange/ghgemissions/gases.html>. Overview of Greenhouse Gases Information.

<https://msc.fema.gov/portal>. FEMA Map Service Center.

<https://www.valleyair.org/rules/1ruleslist.htm>. SJVAPCD Rules and Regulations.

### PERSONS CONSULTED

---

Birkey, James. Project Manager. Brailsford and Dunlavey.

Brouillard, Torry. Executive Director, Residential Life and Housing. UOP.

Chitsazan, Parviz, P.E. City of Stockton Public Works Department, Traffic Engineering.

Germann, Wayne, Lt. UOP Public Services Department.

Heaton, Scott. UOP.

Izmirian, Chad. Senior Vice President. Capstone Development Partners, LLC.

Jensen, Sean. Principal. Genesis Society.

Khloth, Dino. Project Engineer. Siegfried Engineering.

Panos, Kosdatinos. University of the Pacific Department of Public Safety.

Larrouy, Richard. Planning Manager. Stockton Department of Community Development.

McDowell, Mike. Planning Manager. Stockton Department of Community Development.

Meckley, Priscilla. Campus Planner, UOP.

Moore, Diane. Principal. Moore Biological Consultants.

Myers, Larry. Project Engineer. Stanton Engineering.

Shijo, Wayne. kdAnderson Transportation Engineers.

Stagg, Ebony. Stockton Department of Municipal Utilities.

Stagnaro, David. Senior Planner, Stockton Department of Community Development.

Stradley, Craig. Principal. Mogavero Notestine and Associates.

## APPENDIX A

### AIR QUALITY MODELING RESULTS

**UOP Student Housing Projec - North of Calaveras River**  
**San Joaquin County, Annual**

## 1.0 Project Characteristics

---

### 1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	155.00	Space	1.39	62,000.00	0
Apartment Mid Rise	142.00	Dwelling Unit	3.74	151,500.00	381

### 1.2 Other Project Characteristics

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.7	<b>Precipitation Freq (Days)</b>	51
<b>Climate Zone</b>	2			<b>Operational Year</b>	2017
<b>Utility Company</b>	Pacific Gas & Electric Company				
<b>CO2 Intensity (lb/MWhr)</b>	641.35	<b>CH4 Intensity (lb/MWhr)</b>	0.029	<b>N2O Intensity (lb/MWhr)</b>	0.006

### 1.3 User Entered Comments & Non-Default Data



## Project Characteristics -

Land Use - For Mid-Rise Apt, the only Size Metric in CalEEMod is units. Enter trip gen rates to be consistent with TIS Trip Gen based on beds. Units, sq ft & parking spaces from BaseCamp.

Construction Phase - Demolition phase deleted. Default construction period of 13.5 months extended by 1.4 to 19 months. Start & length of construction period per BaseCamp.

Off-road Equipment - Hours per day factored by 0.71 to reflect extended construction period.

Off-road Equipment - Hours per day factored by 0.71 to reflect extended construction period.

Off-road Equipment - Hours per day factored by 0.71 to reflect extended construction period.

Off-road Equipment - Hours per day factored by 0.71 to reflect extended construction period.

Off-road Equipment - Hours per day factored by 0.71 to reflect extended construction period.

Grading - Total area disturbed left at CalEEMod default value.

Architectural Coating - VOC content per SJVAPCD Rule 4601.

Vehicle Trips - Trip generation rates per TIS, converted to number of units. Saturday and Sunday factored per ITE rates for Apartments. Weekday = 6.46, Saturday = 6.21, Sunday = 5.69

Woodstoves - No woodstoves or fireplaces.

Area Coating - VOC content per SJVAPCD Rule 4601.

Mobile Land Use Mitigation - PD-1=BMP-36.

Area Mitigation - VOC content per SJVAPCD Rule 4601.

Energy Mitigation - BE-1, per CEC, Title 24 requires a 25 percent reduction. City of Stockton Climate Action Plan BMPs. LE-1=BMP-45. BE-4=BMP-44.

Water Mitigation - City of Stockton Climate Action Plan BMPs. WUW-1=BMP-50. WUW-3=BMP-51. WUW-4=BMP-52.

Waste Mitigation - City of Stockton Climate Action Plan BMPs. SW-1=BMP-56.

Table Name	Column Name	Default Value	New Value
tblApplianceMitigation	PercentImprovement	30.00	3.00
tblApplianceMitigation	PercentImprovement	15.00	3.00
tblApplianceMitigation	PercentImprovement	50.00	3.00
tblApplianceMitigation	PercentImprovement	15.00	3.00
tblArchitecturalCoating	EF_Nonresidential_Exterior	150.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	150.00	50.00
tblArchitecturalCoating	EF_Residential_Exterior	150.00	50.00

[illegible]

tblOffRoadEquipment	UsageHours	8.00	5.70
tblOffRoadEquipment	UsageHours	8.00	5.70
tblOffRoadEquipment	UsageHours	8.00	5.70
tblProjectCharacteristics	OperationalYear	2014	2017
tblVehicleTrips	ST_TR	7.16	6.21
tblVehicleTrips	SU_TR	6.07	5.69
tblVehicleTrips	WD_TR	6.59	6.46
tblWoodstoves	NumberCatalytic	3.74	0.00
tblWoodstoves	NumberNoncatalytic	3.74	0.00

## 2.0 Emissions Summary

---

## 2.1 Overall Construction

### Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2016	0.3445	2.7321	2.4399	3.8200e-003	0.2628	0.1654	0.4282	0.1120	0.1546	0.2666	0.0000	329.8385	329.8385	0.0566	0.0000	331.0269
2017	0.7123	1.7910	1.7055	3.0100e-003	0.0903	0.1085	0.1988	0.0243	0.1017	0.1260	0.0000	252.6891	252.6891	0.0407	0.0000	253.5428
<b>Total</b>	<b>1.0567</b>	<b>4.5231</b>	<b>4.1453</b>	<b>6.8300e-003</b>	<b>0.3531</b>	<b>0.2739</b>	<b>0.6270</b>	<b>0.1362</b>	<b>0.2563</b>	<b>0.3925</b>	<b>0.0000</b>	<b>582.5276</b>	<b>582.5276</b>	<b>0.0972</b>	<b>0.0000</b>	<b>584.5697</b>

### Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2016	0.3445	2.7321	2.4399	3.8200e-003	0.2628	0.1654	0.4282	0.1120	0.1546	0.2666	0.0000	329.8383	329.8383	0.0566	0.0000	331.0266
2017	0.7123	1.7910	1.7055	3.0100e-003	0.0903	0.1085	0.1988	0.0243	0.1017	0.1260	0.0000	252.6889	252.6889	0.0407	0.0000	253.5426
Total	1.0567	4.5231	4.1453	6.8300e-003	0.3531	0.2739	0.6270	0.1362	0.2563	0.3925	0.0000	582.5272	582.5272	0.0972	0.0000	584.5693

[illegible]

**2.2 Overall Operational****Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.0104	0.0124	1.0664	6.0000e-005		5.7900e-003	5.7900e-003		5.7900e-003	5.7900e-003	0.0000	1.7251	1.7251	1.7400e-003	0.0000	1.7615
Energy	7.6400e-003	0.0653	0.0278	4.2000e-004		5.2800e-003	5.2800e-003		5.2800e-003	5.2800e-003	0.0000	240.9516	240.9516	8.9300e-003	2.9300e-003	242.0483
Mobile	0.6608	2.1980	7.3226	0.0157	0.9780	0.0302	1.0082	0.2623	0.0277	0.2901	0.0000	1,227.619 3	1,227.619 3	0.0424	0.0000	1,228.510 5
Waste						0.0000	0.0000		0.0000	0.0000	13.2594	0.0000	13.2594	0.7836	0.0000	29.7151
Water						0.0000	0.0000		0.0000	0.0000	2.9352	20.5024	23.4376	0.3024	7.3100e-003	32.0541
<b>Total</b>	<b>1.6788</b>	<b>2.2757</b>	<b>8.4168</b>	<b>0.0162</b>	<b>0.9780</b>	<b>0.0412</b>	<b>1.0193</b>	<b>0.2623</b>	<b>0.0388</b>	<b>0.3011</b>	<b>16.1946</b>	<b>1,490.798 3</b>	<b>1,506.992 9</b>	<b>1.1391</b>	<b>0.0102</b>	<b>1,534.089 6</b>

## 2.2 Overall Operational

### Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.9150	0.0124	1.0664	6.0000e-005		5.7900e-003	5.7900e-003		5.7900e-003	5.7900e-003	0.0000	1.7251	1.7251	1.7400e-003	0.0000	1.7615
Energy	6.0600e-003	0.0518	0.0220	3.3000e-004		4.1900e-003	4.1900e-003		4.1900e-003	4.1900e-003	0.0000	208.9509	208.9509	7.8900e-003	2.4900e-003	209.8893
Mobile	0.6510	2.1172	7.1296	0.0151	0.9352	0.0289	0.9642	0.2508	0.0266	0.2774	0.0000	1,175.6016	1,175.6016	0.0408	0.0000	1,176.4584
Waste						0.0000	0.0000		0.0000	0.0000	11.9334	0.0000	11.9334	0.7053	0.0000	26.7436
Water						0.0000	0.0000		0.0000	0.0000	2.3482	11.6509	13.9990	0.2417	5.7900e-003	20.8702
<b>Total</b>	<b>1.5720</b>	<b>2.1814</b>	<b>8.2181</b>	<b>0.0155</b>	<b>0.9352</b>	<b>0.0389</b>	<b>0.9741</b>	<b>0.2508</b>	<b>0.0366</b>	<b>0.2874</b>	<b>14.2816</b>	<b>1,397.9284</b>	<b>1,412.2100</b>	<b>0.9973</b>	<b>8.2800e-003</b>	<b>1,435.7231</b>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
<b>Percent Reduction</b>	<b>6.36</b>	<b>4.14</b>	<b>2.36</b>	<b>4.69</b>	<b>4.38</b>	<b>5.65</b>	<b>4.43</b>	<b>4.38</b>	<b>5.77</b>	<b>4.55</b>	<b>11.81</b>	<b>6.23</b>	<b>6.29</b>	<b>12.45</b>	<b>19.14</b>	<b>6.41</b>

## 3.0 Construction Detail

### Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	3/1/2016	3/18/2016	5	14	
2	Grading	Grading	3/19/2016	4/27/2016	5	28	
3	Building Construction	Building Construction	4/28/2016	7/21/2017	5	322	
4	Paving	Paving	7/22/2017	8/30/2017	5	28	
5	Architectural Coating	Architectural Coating	8/31/2017	10/9/2017	5	28	

**Acres of Grading (Site Preparation Phase): 0**

**Acres of Grading (Grading Phase): 10**

**Acres of Paving: 0**

**Residential Indoor: 306,788; Residential Outdoor: 102,263; Non-Residential Indoor: 2,790; Non-Residential Outdoor: 930 (Architectural Coating – sqft)**

**OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	5.70	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	5.70	97	0.37
Grading	Excavators	1	5.70	162	0.38
Grading	Graders	1	5.70	174	0.41
Grading	Rubber Tired Dozers	1	5.70	255	0.40
Grading	Tractors/Loaders/Backhoes	3	5.70	97	0.37
Building Construction	Cranes	1	5.00	226	0.29
Building Construction	Forklifts	3	5.70	89	0.20
Building Construction	Generator Sets	1	5.70	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	5.00	97	0.37
Building Construction	Welders	1	5.70	46	0.45
Paving	Pavers	2	5.70	125	0.42
Paving	Paving Equipment	2	5.70	130	0.36
Paving	Rollers	2	5.70	80	0.38
Architectural Coating	Air Compressors	1	4.30	78	0.48

**Trips and VMT**

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	128.00	25.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	26.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**



**3.2 Site Preparation - 2016****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0901	0.0000	0.0901	0.0495	0.0000	0.0495	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0253	0.2725	0.2050	1.9000e-004		0.0147	0.0147		0.0135	0.0135	0.0000	18.3925	18.3925	5.5500e-003	0.0000	18.5090
<b>Total</b>	<b>0.0253</b>	<b>0.2725</b>	<b>0.2050</b>	<b>1.9000e-004</b>	<b>0.0901</b>	<b>0.0147</b>	<b>0.1048</b>	<b>0.0495</b>	<b>0.0135</b>	<b>0.0630</b>	<b>0.0000</b>	<b>18.3925</b>	<b>18.3925</b>	<b>5.5500e-003</b>	<b>0.0000</b>	<b>18.5090</b>

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.5000e-004	5.7000e-004	5.5200e-003	1.0000e-005	1.0000e-003	1.0000e-005	1.0100e-003	2.7000e-004	1.0000e-005	2.7000e-004	0.0000	0.8922	0.8922	5.0000e-005	0.0000	0.8931
<b>Total</b>	<b>4.5000e-004</b>	<b>5.7000e-004</b>	<b>5.5200e-003</b>	<b>1.0000e-005</b>	<b>1.0000e-003</b>	<b>1.0000e-005</b>	<b>1.0100e-003</b>	<b>2.7000e-004</b>	<b>1.0000e-005</b>	<b>2.7000e-004</b>	<b>0.0000</b>	<b>0.8922</b>	<b>0.8922</b>	<b>5.0000e-005</b>	<b>0.0000</b>	<b>0.8931</b>

**3.2 Site Preparation - 2016****Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0901	0.0000	0.0901	0.0495	0.0000	0.0495	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0253	0.2725	0.2050	1.9000e-004		0.0147	0.0147		0.0135	0.0135	0.0000	18.3924	18.3924	5.5500e-003	0.0000	18.5089
<b>Total</b>	<b>0.0253</b>	<b>0.2725</b>	<b>0.2050</b>	<b>1.9000e-004</b>	<b>0.0901</b>	<b>0.0147</b>	<b>0.1048</b>	<b>0.0495</b>	<b>0.0135</b>	<b>0.0630</b>	<b>0.0000</b>	<b>18.3924</b>	<b>18.3924</b>	<b>5.5500e-003</b>	<b>0.0000</b>	<b>18.5089</b>

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.5000e-004	5.7000e-004	5.5200e-003	1.0000e-005	1.0000e-003	1.0000e-005	1.0100e-003	2.7000e-004	1.0000e-005	2.7000e-004	0.0000	0.8922	0.8922	5.0000e-005	0.0000	0.8931
<b>Total</b>	<b>4.5000e-004</b>	<b>5.7000e-004</b>	<b>5.5200e-003</b>	<b>1.0000e-005</b>	<b>1.0000e-003</b>	<b>1.0000e-005</b>	<b>1.0100e-003</b>	<b>2.7000e-004</b>	<b>1.0000e-005</b>	<b>2.7000e-004</b>	<b>0.0000</b>	<b>0.8922</b>	<b>0.8922</b>	<b>5.0000e-005</b>	<b>0.0000</b>	<b>0.8931</b>

### 3.3 Grading - 2016

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0654	0.0000	0.0654	0.0336	0.0000	0.0336	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0366	0.3835	0.2601	3.0000e-004		0.0219	0.0219		0.0202	0.0202	0.0000	27.9962	27.9962	8.4400e-003	0.0000	28.1736
<b>Total</b>	<b>0.0366</b>	<b>0.3835</b>	<b>0.2601</b>	<b>3.0000e-004</b>	<b>0.0654</b>	<b>0.0219</b>	<b>0.0873</b>	<b>0.0336</b>	<b>0.0202</b>	<b>0.0538</b>	<b>0.0000</b>	<b>27.9962</b>	<b>27.9962</b>	<b>8.4400e-003</b>	<b>0.0000</b>	<b>28.1736</b>

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.6000e-004	9.5000e-004	9.2000e-003	2.0000e-005	1.6700e-003	1.0000e-005	1.6900e-003	4.4000e-004	1.0000e-005	4.6000e-004	0.0000	1.4869	1.4869	8.0000e-005	0.0000	1.4885
<b>Total</b>	<b>7.6000e-004</b>	<b>9.5000e-004</b>	<b>9.2000e-003</b>	<b>2.0000e-005</b>	<b>1.6700e-003</b>	<b>1.0000e-005</b>	<b>1.6900e-003</b>	<b>4.4000e-004</b>	<b>1.0000e-005</b>	<b>4.6000e-004</b>	<b>0.0000</b>	<b>1.4869</b>	<b>1.4869</b>	<b>8.0000e-005</b>	<b>0.0000</b>	<b>1.4885</b>

**3.3 Grading - 2016****Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0654	0.0000	0.0654	0.0336	0.0000	0.0336	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0366	0.3835	0.2601	3.0000e-004		0.0219	0.0219		0.0202	0.0202	0.0000	27.9962	27.9962	8.4400e-003	0.0000	28.1735
<b>Total</b>	<b>0.0366</b>	<b>0.3835</b>	<b>0.2601</b>	<b>3.0000e-004</b>	<b>0.0654</b>	<b>0.0219</b>	<b>0.0873</b>	<b>0.0336</b>	<b>0.0202</b>	<b>0.0538</b>	<b>0.0000</b>	<b>27.9962</b>	<b>27.9962</b>	<b>8.4400e-003</b>	<b>0.0000</b>	<b>28.1735</b>

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.6000e-004	9.5000e-004	9.2000e-003	2.0000e-005	1.6700e-003	1.0000e-005	1.6900e-003	4.4000e-004	1.0000e-005	4.6000e-004	0.0000	1.4869	1.4869	8.0000e-005	0.0000	1.4885
<b>Total</b>	<b>7.6000e-004</b>	<b>9.5000e-004</b>	<b>9.2000e-003</b>	<b>2.0000e-005</b>	<b>1.6700e-003</b>	<b>1.0000e-005</b>	<b>1.6900e-003</b>	<b>4.4000e-004</b>	<b>1.0000e-005</b>	<b>4.6000e-004</b>	<b>0.0000</b>	<b>1.4869</b>	<b>1.4869</b>	<b>8.0000e-005</b>	<b>0.0000</b>	<b>1.4885</b>

**3.4 Building Construction - 2016****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2150	1.8000	1.1684	1.6900e-003		0.1242	0.1242		0.1167	0.1167	0.0000	152.8883	152.8883	0.0379	0.0000	153.6848
<b>Total</b>	<b>0.2150</b>	<b>1.8000</b>	<b>1.1684</b>	<b>1.6900e-003</b>		<b>0.1242</b>	<b>0.1242</b>		<b>0.1167</b>	<b>0.1167</b>	<b>0.0000</b>	<b>152.8883</b>	<b>152.8883</b>	<b>0.0379</b>	<b>0.0000</b>	<b>153.6848</b>

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0255	0.2231	0.2954	5.3000e-004	0.0144	3.9300e-003	0.0183	4.1300e-003	3.6100e-003	7.7400e-003	0.0000	47.9727	47.9727	4.2000e-004	0.0000	47.9816
Worker	0.0408	0.0515	0.4962	1.0800e-003	0.0902	6.8000e-004	0.0909	0.0240	6.2000e-004	0.0246	0.0000	80.2097	80.2097	4.1200e-003	0.0000	80.2962
<b>Total</b>	<b>0.0663</b>	<b>0.2746</b>	<b>0.7916</b>	<b>1.6100e-003</b>	<b>0.1046</b>	<b>4.6100e-003</b>	<b>0.1092</b>	<b>0.0281</b>	<b>4.2300e-003</b>	<b>0.0324</b>	<b>0.0000</b>	<b>128.1824</b>	<b>128.1824</b>	<b>4.5400e-003</b>	<b>0.0000</b>	<b>128.2779</b>

**3.4 Building Construction - 2016****Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2150	1.8000	1.1684	1.6900e-003		0.1242	0.1242		0.1167	0.1167	0.0000	152.8881	152.8881	0.0379	0.0000	153.6847
<b>Total</b>	<b>0.2150</b>	<b>1.8000</b>	<b>1.1684</b>	<b>1.6900e-003</b>		<b>0.1242</b>	<b>0.1242</b>		<b>0.1167</b>	<b>0.1167</b>	<b>0.0000</b>	<b>152.8881</b>	<b>152.8881</b>	<b>0.0379</b>	<b>0.0000</b>	<b>153.6847</b>

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0255	0.2231	0.2954	5.3000e-004	0.0144	3.9300e-003	0.0183	4.1300e-003	3.6100e-003	7.7400e-003	0.0000	47.9727	47.9727	4.2000e-004	0.0000	47.9816
Worker	0.0408	0.0515	0.4962	1.0800e-003	0.0902	6.8000e-004	0.0909	0.0240	6.2000e-004	0.0246	0.0000	80.2097	80.2097	4.1200e-003	0.0000	80.2962
<b>Total</b>	<b>0.0663</b>	<b>0.2746</b>	<b>0.7916</b>	<b>1.6100e-003</b>	<b>0.1046</b>	<b>4.6100e-003</b>	<b>0.1092</b>	<b>0.0281</b>	<b>4.2300e-003</b>	<b>0.0324</b>	<b>0.0000</b>	<b>128.1824</b>	<b>128.1824</b>	<b>4.5400e-003</b>	<b>0.0000</b>	<b>128.2779</b>

**3.4 Building Construction - 2017****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1604	1.3659	0.9376	1.3900e-003		0.0921	0.0921		0.0865	0.0865	0.0000	123.8634	123.8634	0.0305	0.0000	124.5038
<b>Total</b>	<b>0.1604</b>	<b>1.3659</b>	<b>0.9376</b>	<b>1.3900e-003</b>		<b>0.0921</b>	<b>0.0921</b>		<b>0.0865</b>	<b>0.0865</b>	<b>0.0000</b>	<b>123.8634</b>	<b>123.8634</b>	<b>0.0305</b>	<b>0.0000</b>	<b>124.5038</b>

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0183	0.1611	0.2250	4.3000e-004	0.0118	2.7000e-003	0.0145	3.3900e-003	2.4800e-003	5.8600e-003	0.0000	38.6296	38.6296	3.2000e-004	0.0000	38.6363
Worker	0.0292	0.0373	0.3552	8.8000e-004	0.0739	5.3000e-004	0.0745	0.0197	4.9000e-004	0.0201	0.0000	63.0903	63.0903	3.0500e-003	0.0000	63.1545
<b>Total</b>	<b>0.0476</b>	<b>0.1984</b>	<b>0.5802</b>	<b>1.3100e-003</b>	<b>0.0857</b>	<b>3.2300e-003</b>	<b>0.0889</b>	<b>0.0230</b>	<b>2.9700e-003</b>	<b>0.0260</b>	<b>0.0000</b>	<b>101.7199</b>	<b>101.7199</b>	<b>3.3700e-003</b>	<b>0.0000</b>	<b>101.7908</b>

**3.4 Building Construction - 2017****Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1604	1.3659	0.9376	1.3900e-003		0.0921	0.0921		0.0865	0.0865	0.0000	123.8632	123.8632	0.0305	0.0000	124.5036
<b>Total</b>	<b>0.1604</b>	<b>1.3659</b>	<b>0.9376</b>	<b>1.3900e-003</b>		<b>0.0921</b>	<b>0.0921</b>		<b>0.0865</b>	<b>0.0865</b>	<b>0.0000</b>	<b>123.8632</b>	<b>123.8632</b>	<b>0.0305</b>	<b>0.0000</b>	<b>124.5036</b>

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0183	0.1611	0.2250	4.3000e-004	0.0118	2.7000e-003	0.0145	3.3900e-003	2.4800e-003	5.8600e-003	0.0000	38.6296	38.6296	3.2000e-004	0.0000	38.6363
Worker	0.0292	0.0373	0.3552	8.8000e-004	0.0739	5.3000e-004	0.0745	0.0197	4.9000e-004	0.0201	0.0000	63.0903	63.0903	3.0500e-003	0.0000	63.1545
<b>Total</b>	<b>0.0476</b>	<b>0.1984</b>	<b>0.5802</b>	<b>1.3100e-003</b>	<b>0.0857</b>	<b>3.2300e-003</b>	<b>0.0889</b>	<b>0.0230</b>	<b>2.9700e-003</b>	<b>0.0260</b>	<b>0.0000</b>	<b>101.7199</b>	<b>101.7199</b>	<b>3.3700e-003</b>	<b>0.0000</b>	<b>101.7908</b>



### 3.5 Paving - 2017

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0190	0.2025	0.1469	2.2000e-004		0.0114	0.0114		0.0105	0.0105	0.0000	20.6417	20.6417	6.3200e-003	0.0000	20.7745
Paving	1.8200e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0209</b>	<b>0.2025</b>	<b>0.1469</b>	<b>2.2000e-004</b>		<b>0.0114</b>	<b>0.0114</b>		<b>0.0105</b>	<b>0.0105</b>	<b>0.0000</b>	<b>20.6417</b>	<b>20.6417</b>	<b>6.3200e-003</b>	<b>0.0000</b>	<b>20.7745</b>

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.6000e-004	8.4000e-004	8.0400e-003	2.0000e-005	1.6700e-003	1.0000e-005	1.6800e-003	4.4000e-004	1.0000e-005	4.6000e-004	0.0000	1.4277	1.4277	7.0000e-005	0.0000	1.4291
<b>Total</b>	<b>6.6000e-004</b>	<b>8.4000e-004</b>	<b>8.0400e-003</b>	<b>2.0000e-005</b>	<b>1.6700e-003</b>	<b>1.0000e-005</b>	<b>1.6800e-003</b>	<b>4.4000e-004</b>	<b>1.0000e-005</b>	<b>4.6000e-004</b>	<b>0.0000</b>	<b>1.4277</b>	<b>1.4277</b>	<b>7.0000e-005</b>	<b>0.0000</b>	<b>1.4291</b>

### 3.5 Paving - 2017

#### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0190	0.2025	0.1469	2.2000e-004		0.0114	0.0114		0.0105	0.0105	0.0000	20.6417	20.6417	6.3200e-003	0.0000	20.7745
Paving	1.8200e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0209</b>	<b>0.2025</b>	<b>0.1469</b>	<b>2.2000e-004</b>		<b>0.0114</b>	<b>0.0114</b>		<b>0.0105</b>	<b>0.0105</b>	<b>0.0000</b>	<b>20.6417</b>	<b>20.6417</b>	<b>6.3200e-003</b>	<b>0.0000</b>	<b>20.7745</b>

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.6000e-004	8.4000e-004	8.0400e-003	2.0000e-005	1.6700e-003	1.0000e-005	1.6800e-003	4.4000e-004	1.0000e-005	4.6000e-004	0.0000	1.4277	1.4277	7.0000e-005	0.0000	1.4291
<b>Total</b>	<b>6.6000e-004</b>	<b>8.4000e-004</b>	<b>8.0400e-003</b>	<b>2.0000e-005</b>	<b>1.6700e-003</b>	<b>1.0000e-005</b>	<b>1.6800e-003</b>	<b>4.4000e-004</b>	<b>1.0000e-005</b>	<b>4.6000e-004</b>	<b>0.0000</b>	<b>1.4277</b>	<b>1.4277</b>	<b>7.0000e-005</b>	<b>0.0000</b>	<b>1.4291</b>

### 3.6 Architectural Coating - 2017

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.4783					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.3300e-003	0.0219	0.0187	3.0000e-005		1.7400e-003	1.7400e-003		1.7400e-003	1.7400e-003	0.0000	2.5618	2.5618	2.7000e-004	0.0000	2.5674
<b>Total</b>	<b>0.4816</b>	<b>0.0219</b>	<b>0.0187</b>	<b>3.0000e-005</b>		<b>1.7400e-003</b>	<b>1.7400e-003</b>		<b>1.7400e-003</b>	<b>1.7400e-003</b>	<b>0.0000</b>	<b>2.5618</b>	<b>2.5618</b>	<b>2.7000e-004</b>	<b>0.0000</b>	<b>2.5674</b>

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1500e-003	1.4600e-003	0.0139	3.0000e-005	2.9000e-003	2.0000e-005	2.9200e-003	7.7000e-004	2.0000e-005	7.9000e-004	0.0000	2.4747	2.4747	1.2000e-004	0.0000	2.4772
<b>Total</b>	<b>1.1500e-003</b>	<b>1.4600e-003</b>	<b>0.0139</b>	<b>3.0000e-005</b>	<b>2.9000e-003</b>	<b>2.0000e-005</b>	<b>2.9200e-003</b>	<b>7.7000e-004</b>	<b>2.0000e-005</b>	<b>7.9000e-004</b>	<b>0.0000</b>	<b>2.4747</b>	<b>2.4747</b>	<b>1.2000e-004</b>	<b>0.0000</b>	<b>2.4772</b>

### 3.6 Architectural Coating - 2017

#### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.4783					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.3300e-003	0.0219	0.0187	3.0000e-005		1.7400e-003	1.7400e-003		1.7400e-003	1.7400e-003	0.0000	2.5618	2.5618	2.7000e-004	0.0000	2.5674
<b>Total</b>	<b>0.4816</b>	<b>0.0219</b>	<b>0.0187</b>	<b>3.0000e-005</b>		<b>1.7400e-003</b>	<b>1.7400e-003</b>		<b>1.7400e-003</b>	<b>1.7400e-003</b>	<b>0.0000</b>	<b>2.5618</b>	<b>2.5618</b>	<b>2.7000e-004</b>	<b>0.0000</b>	<b>2.5674</b>

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1500e-003	1.4600e-003	0.0139	3.0000e-005	2.9000e-003	2.0000e-005	2.9200e-003	7.7000e-004	2.0000e-005	7.9000e-004	0.0000	2.4747	2.4747	1.2000e-004	0.0000	2.4772
<b>Total</b>	<b>1.1500e-003</b>	<b>1.4600e-003</b>	<b>0.0139</b>	<b>3.0000e-005</b>	<b>2.9000e-003</b>	<b>2.0000e-005</b>	<b>2.9200e-003</b>	<b>7.7000e-004</b>	<b>2.0000e-005</b>	<b>7.9000e-004</b>	<b>0.0000</b>	<b>2.4747</b>	<b>2.4747</b>	<b>1.2000e-004</b>	<b>0.0000</b>	<b>2.4772</b>

### 4.0 Operational Detail - Mobile

## 4.1 Mitigation Measures Mobile

### Limit Parking Supply

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.6510	2.1172	7.1296	0.0151	0.9352	0.0289	0.9642	0.2508	0.0266	0.2774	0.0000	1,175.6016	1,175.6016	0.0408	0.0000	1,176.4584
Unmitigated	0.6608	2.1980	7.3226	0.0157	0.9780	0.0302	1.0082	0.2623	0.0277	0.2901	0.0000	1,227.6193	1,227.6193	0.0424	0.0000	1,228.5105

## 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	917.32	881.82	807.98	2,598,265	2,484,591
Parking Lot	0.00	0.00	0.00		
Total	917.32	881.82	807.98	2,598,265	2,484,591

## 4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	10.80	7.30	7.50	45.60	19.00	35.40	86	11	3
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.462947	0.064824	0.160141	0.167229	0.044913	0.005940	0.017967	0.064224	0.001117	0.001471	0.006278	0.000643	0.002306

## 5.0 Energy Detail

### 4.4 Fleet Mix

Historical Energy Use: N

## 5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	148.9952	148.9952	6.7400e-003	1.3900e-003	149.5688
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	165.3458	165.3458	7.4800e-003	1.5500e-003	165.9823
NaturalGas Mitigated	6.0600e-003	0.0518	0.0220	3.3000e-004		4.1900e-003	4.1900e-003		4.1900e-003	4.1900e-003	0.0000	59.9557	59.9557	1.1500e-003	1.1000e-003	60.3205
NaturalGas Unmitigated	7.6400e-003	0.0653	0.0278	4.2000e-004		5.2800e-003	5.2800e-003		5.2800e-003	5.2800e-003	0.0000	75.6059	75.6059	1.4500e-003	1.3900e-003	76.0660

## 5.2 Energy by Land Use - NaturalGas

### Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	1.4168e+006	7.6400e-003	0.0653	0.0278	4.2000e-004		5.2800e-003	5.2800e-003		5.2800e-003	5.2800e-003	0.0000	75.6059	75.6059	1.4500e-003	1.3900e-003	76.0660
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>7.6400e-003</b>	<b>0.0653</b>	<b>0.0278</b>	<b>4.2000e-004</b>		<b>5.2800e-003</b>	<b>5.2800e-003</b>		<b>5.2800e-003</b>	<b>5.2800e-003</b>	<b>0.0000</b>	<b>75.6059</b>	<b>75.6059</b>	<b>1.4500e-003</b>	<b>1.3900e-003</b>	<b>76.0660</b>

### Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	1.12353e+006	6.0600e-003	0.0518	0.0220	3.3000e-004		4.1900e-003	4.1900e-003		4.1900e-003	4.1900e-003	0.0000	59.9557	59.9557	1.1500e-003	1.1000e-003	60.3205
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>6.0600e-003</b>	<b>0.0518</b>	<b>0.0220</b>	<b>3.3000e-004</b>		<b>4.1900e-003</b>	<b>4.1900e-003</b>		<b>4.1900e-003</b>	<b>4.1900e-003</b>	<b>0.0000</b>	<b>59.9557</b>	<b>59.9557</b>	<b>1.1500e-003</b>	<b>1.1000e-003</b>	<b>60.3205</b>

## 5.3 Energy by Land Use - Electricity

### Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	513811	149.4736	6.7600e-003	1.4000e-003	150.0491
Parking Lot	54560	15.8721	7.2000e-004	1.5000e-004	15.9332
<b>Total</b>		<b>165.3458</b>	<b>7.4800e-003</b>	<b>1.5500e-003</b>	<b>165.9823</b>

### Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	472884	137.5673	6.2200e-003	1.2900e-003	138.0969
Parking Lot	39283.2	11.4279	5.2000e-004	1.1000e-004	11.4719
<b>Total</b>		<b>148.9952</b>	<b>6.7400e-003</b>	<b>1.4000e-003</b>	<b>149.5688</b>

## 6.0 Area Detail

### 6.1 Mitigation Measures Area



Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.9150	0.0124	1.0664	6.0000e-005		5.7900e-003	5.7900e-003		5.7900e-003	5.7900e-003	0.0000	1.7251	1.7251	1.7400e-003	0.0000	1.7615
Unmitigated	1.0104	0.0124	1.0664	6.0000e-005		5.7900e-003	5.7900e-003		5.7900e-003	5.7900e-003	0.0000	1.7251	1.7251	1.7400e-003	0.0000	1.7615

**6.2 Area by SubCategory****Unmitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1433					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.8338					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0333	0.0124	1.0664	6.0000e-005		5.7900e-003	5.7900e-003		5.7900e-003	5.7900e-003	0.0000	1.7251	1.7251	1.7400e-003	0.0000	1.7615
<b>Total</b>	<b>1.0104</b>	<b>0.0124</b>	<b>1.0664</b>	<b>6.0000e-005</b>		<b>5.7900e-003</b>	<b>5.7900e-003</b>		<b>5.7900e-003</b>	<b>5.7900e-003</b>	<b>0.0000</b>	<b>1.7251</b>	<b>1.7251</b>	<b>1.7400e-003</b>	<b>0.0000</b>	<b>1.7615</b>

## 6.2 Area by SubCategory

### Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0478					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.8338					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0333	0.0124	1.0664	6.0000e-005		5.7900e-003	5.7900e-003		5.7900e-003	5.7900e-003	0.0000	1.7251	1.7251	1.7400e-003	0.0000	1.7615
<b>Total</b>	<b>0.9150</b>	<b>0.0124</b>	<b>1.0664</b>	<b>6.0000e-005</b>		<b>5.7900e-003</b>	<b>5.7900e-003</b>		<b>5.7900e-003</b>	<b>5.7900e-003</b>	<b>0.0000</b>	<b>1.7251</b>	<b>1.7251</b>	<b>1.7400e-003</b>	<b>0.0000</b>	<b>1.7615</b>

## 7.0 Water Detail

### 7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

Use Water Efficient Landscaping

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	13.9990	0.2417	5.7900e-003	20.8702
Unmitigated	23.4376	0.3024	7.3100e-003	32.0541

## 7.2 Water by Land Use

### Unmitigated

	Indoor/ Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	9.25187 / 5.8327	23.4376	0.3024	7.3100e-003	32.0541
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>23.4376</b>	<b>0.3024</b>	<b>7.3100e-003</b>	<b>32.0541</b>

## 7.2 Water by Land Use

### Mitigated

	Indoor/ Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	7.4015 / 0	13.9990	0.2417	5.7900e-003	20.8702
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>13.9990</b>	<b>0.2417</b>	<b>5.7900e-003</b>	<b>20.8702</b>

## 8.0 Waste Detail

---

### 8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

### Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	11.9334	0.7053	0.0000	26.7436
Unmitigated	13.2594	0.7836	0.0000	29.7151

## 8.2 Waste by Land Use

### Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	65.32	13.2594	0.7836	0.0000	29.7151
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>13.2594</b>	<b>0.7836</b>	<b>0.0000</b>	<b>29.7151</b>

### Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	58.788	11.9334	0.7053	0.0000	26.7436
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>11.9334</b>	<b>0.7053</b>	<b>0.0000</b>	<b>26.7436</b>

## 9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
----------------	--------	-----------	-----------	-------------	-------------	-----------

## **10.0 Vegetation**

---

APPENDIX B  
BIOLOGICAL INVENTORY REPORT



# MOORE BIOLOGICAL CONSULTANTS

August 25, 2015

Mr. Charlie Simpson  
BaseCamp Environmental  
6653 Embarcadero Dr., Ste. A  
Stockton, CA 95219

Subject: "UNIVERSITY OF THE PACIFIC STUDENT HOUSING PROJECT",  
STOCKTON, SAN JOAQUIN COUNTY, CALIFORNIA: PRELIMINARY  
BIOLOGICAL RESOURCES REVIEW

Dear Charlie:

Thank you for asking Moore Biological Consultants to assist with a preliminary biological resources review of this portion of the University of Pacific (UOP) campus (Figure 1). The focus of our work was to document existing biological resources in the site, conduct a survey to determine presence or absence of potentially jurisdictional waters or wetlands, and search for suitable habitat for or presence of special-status species within the site. This letter summarizes our findings.

## Methods

Prior to the field survey, we conducted a search of California Department of Fish and Wildlife's (CDFW) California Natural Diversity Database (CNDDDB, 2015). This information was used to identify wildlife and plant species that have been previously documented in the project vicinity or have the potential to occur based on suitable habitat and geographical distribution. The USFWS on-line-maps of designated critical habitat were also downloaded and plotted with respect to the site.



Source (Basemap): Google Earth

Scale: 1 inch = 300+/- feet

**Moore Biological**



**FIGURE 1**  
**SURVEY AREA**

A field survey was conducted on August 20, 2015. The survey consisted of walking throughout the site making observations of current habitat conditions and noting surrounding land uses, general habitat types, and plant and wildlife species. The survey included an assessment of the site for presence or absence of potentially jurisdictional Waters of the U.S. (a term that includes wetlands) as defined by the ACOE (1987; 2008), special-status species, and suitable habitat for special-status species (e.g., blue elderberry shrubs, vernal pools). Trees near the site were assessed for the potential use by nesting raptors, especially Swainson's hawk (*Buteo swainsoni*). The site was also searched for burrowing owls (*Athene cunicularia*) or ground squirrel burrows that could be utilized by burrowing owls.

## Results

GENERAL SETTING: The survey area includes tennis courts, soccer fields, and portions of two parking lots along the Calaveras River on the UOP campus, in Stockton, San Joaquin County, California (Figure 1). The entire survey area is developed and all of the natural habitats in the site have been replaced by pavement, turf, or landscaping. The only trees in the survey area are a few coastal oaks (*Quercus agrifolia*) in the southwest corner of the soccer fields, a few walnuts along the Calaveras River, and some small ornamentals in the parking lots (see photographs in Attachment A). No blue elderberry (*Sambucus mexicana*) shrubs were observed in or adjacent to the site.

WATERS OF THE U.S. AND WETLANDS: No potentially jurisdictional wetlands or Waters of the U.S. were observed within the survey. The Calaveras River, a jurisdictional Water of the U.S., is separated from the campus by a levee. There will be no project work on the water side of the levee.

SPECIAL-STATUS SPECIES: Special-status plants generally occur in relatively undisturbed areas and are largely found within unique vegetation communities

such as vernal pools, marshes and swamps, and areas with unique soils. Thirteen (13) species of special-status plants were identified in the CNDDDB (2015) search: alkali milk-vetch (*Astragalus tener* var. *tener*), heartscale (*Atriplex cordulata*), big tarplant (*Blepharizonia plumosa* ssp. *plumosa*), watershield (*Brasenia schreberi*), San Joaquin spearscale (*Atriplex joaquiniana*), round-leaved filaree (*California macrophyllum*), palmate-bracted bird's beak (*Cordylanthus palmatus*), wooly rose mallow (*Hibiscus lasiocarpus*), Delta tule pea (*Lathyrus jepsonii* var. *jepsonii*), Mason's lilaeopsis (*Lilaeopsis masonii*), Sanford's arrowhead (*Saggitaria sanfordii*), Suisun marsh aster (*Symphotrichum lentum*) and saline clover (*Trifolium hydrophilum*) (Attachment B).

Suisun marsh aster is recorded in the CNDDDB as occurring in the Calaveras River, just south of the site; no other special-status plants are recorded in the CNDDDB in close proximity to the site. The survey area is developed and does not provide suitable habitat for special-status plants.

The potential for intensive use of habitats within the survey area by special-status wildlife species is also low. Special-status wildlife species recorded in greater project vicinity in the CNDDDB (2015) include Swainson's hawk, burrowing owl, tricolored blackbird (*Agelaius tricolor*), white-tailed kite (*Elanus leucurus*), least Bell's vireo (*Vireo bellii pusillus*), giant garter snake (*Thamnophis gigas*), California tiger salamander (*Ambystoma californiense*), Central Valley steelhead (*Oncorhynchus mykiss*), delta smelt (*Hypomesus transpacificus*), longfin smelt (*Spirinchus thaleichthys*), and vernal pool tadpole shrimp (*Lepidurus packardii*) (Attachment B).

Swainson's hawk, burrowing owl, tricolored blackbird, white-tailed kite, least Bell's vireo, and other bird species protected by the Migratory Bird Treaty Act have potential to occur in or near the site and could be adversely affected by site construction if they nested in or near the work areas during construction. Giant garter snake, delta smelt, longfin smelt, and Central Valley steelhead are aquatic species that could potentially occur in the Calaveras River; California tiger

salamander and vernal pool tadpole shrimp are vernal pool species. The site does not provide suitable habitat for any of these aquatic species.

CRITICAL HABITAT: The Calaveras River is designated critical habitat for Central Valley steelhead (NOAA, 2005) and the entire campus is within designated critical habitat for delta smelt (USFWS, 1994) (Attachment C). Work on the land side of the levee slope should have no effect on the Calaveras River, or other regional waterways and no effect on the suitability of these waterways for delta smelt or Central Valley steelhead.

## **Conclusions and Recommendations**

- The site consists of tennis courts, soccer fields, and portions of two parking lots. On-site habitats are biologically unremarkable.
- No potential jurisdictional wetlands or Waters of the U.S. were observed in the body of the site.
- Due to a lack of suitable habitat, it is unlikely that special-status plants occur in the site.
- With the exception of Swainson's hawk and burrowing owl, no special-status wildlife species are expected to occur in the site on more than a very occasional or transitory basis. Swainson's hawk and burrowing owl were not observed during the field survey, but could nest in or near the site in the future.
- Pre-construction surveys for nesting Swainson's hawks are recommended if construction commences between March 1 and September 15. If active nests are found, a qualified biologist should determine the need (if any) for



temporal restrictions on construction. The determination should utilize criteria set forth by CDFW (CDFG, 1994).

- Pre-construction surveys for burrowing owls in the site are recommended if construction commences between February 1 and August 31. If occupied burrows are found, a qualified biologist should determine the need (if any) for temporal restrictions on construction. The determination should be pursuant to criteria set forth by CDFW (CDFG, 2012).
- The trees in the site could be used by nesting birds protected by the Migratory Bird Treaty Act of 1918. If the project involves tree removal during the general avian nesting season (March 1 to July 31), a pre-construction survey for nesting birds is recommended. If active nests are found, tree removal should be delayed until the young fledge.

We hope this information is useful. Please call me at (209) 745-1159 with any questions.

Sincerely,



Diane S. Moore, M.S.  
Principal Biologist

## References and Literature Consulted

ACOE (U.S. Army Corps of Engineers). 1987. Technical Report Y87-1. U.S. Army Corps of Engineers Waterways Experiment Station, Vicksburg, MI.

ACOE. 2008. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region. U.S. Army Engineer Research and Development Center, Vicksburg, MS. September.

CDFG (California Department of Fish and Game). 1994. Staff Report regarding Mitigation for Impacts to Swainson's Hawks (*Buteo Swainsoni*) in the Central Valley of California. November.

CDFG (California Department of Fish and Game). 2012. Staff Report on Burrowing Owl Mitigation. California Department of Fish and Wildlife, Sacramento, California. March 7.

CNDDDB (California Natural Diversity Database). 2015. California Department of Fish and Wildlife's Natural Heritage Program, Sacramento, California.

National Oceanic and Atmospheric Administration (NOAA). 2005. Endangered and Threatened Species; Designation of Critical Habitat for Seven Evolutionarily Significant Units of Pacific Salmon and Steelhead in California; Final Rule. Federal Register 70 (170): 52488-52585. September 2, 2005.

USFWS (United States Fish and Wildlife Service) 1994. Final Critical Habitat for the Delta Smelt (*Hypomesus transpacificus*). Federal Register Vol. 59, No. 242, December 19, 1994, pp. 65256 – 65279.

USFWS. 2005a. Part II, Department of the Interior, Fish and Wildlife Service. 50 CFR Part 17: Endangered and Threatened Wildlife and Plants; Final Designation of Critical Habitat for Four Vernal Pool Crustaceans and Eleven Vernal Pool Plants in California and Southern Oregon; Evaluation and Economic Exclusions from August 2003 Final Designation, Final Rule. Federal Register Vol. 70, No. 154, August 11.

USFWS. 2005b. Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for the California Tiger Salamander, Central Population; Final Rule. Federal Register Vol. 70, No. 162, August 23, 2005, pp. 49390 – 49458.

Attachment A

Photographs





Parking lot in the east part of the survey area, looking northwest; 08/20/15.



Tennis courts adjacent to the Calaveras River levee, looking northeast; 08/20/15.





Soccer fields that comprise the body of the survey area, looking southwest; 08/20/15. Note the three oak trees in the distance, which are in the southwest corner of the soccer fields.



Walnut trees adjacent to the Calaveras River levee, looking northeast; 08/20/15.

Attachment B

CNDDDB Summary Report and Exhibits

& USFWS Species List



Selected Elements by Scientific Name  
California Department of Fish and Wildlife  
California Natural Diversity Database



Query Criteria: Quad is (Lodi South (3812113) or Stockton West (3712183))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<b><i>Agelaius tricolor</i></b> tricolored blackbird	ABPBXB0020	None	None	G2G3	S1S2	SSC
<b><i>Ambystoma californiense</i></b> California tiger salamander	AAAAA01180	Threatened	Threatened	G2G3	S2S3	SSC
<b><i>Astragalus tener</i> var. <i>tener</i></b> alkali milk-vetch	PDFAB0F8R1	None	None	G2T2	S2	1B.2
<b><i>Athene cunicularia</i></b> burrowing owl	ABNSB10010	None	None	G4	S3	SSC
<b><i>Atriplex cordulata</i> var. <i>cordulata</i></b> heartscale	PDCHE040B0	None	None	G3T2	S2	1B.2
<b><i>Blepharizonia plumosa</i></b> big tarplant	PDAST1C011	None	None	G2	S2	1B.1
<b><i>Brasenia schreberi</i></b> watershield	PDCAB01010	None	None	G5	S3	2B.3
<b><i>Buteo swainsoni</i></b> Swainson's hawk	ABNKC19070	None	Threatened	G5	S3	
<b><i>California macrophylla</i></b> round-leaved filaree	PDGER01070	None	None	G3?	S3?	1B.1
<b><i>Chloropyron palmatum</i></b> palmate-bracted salty bird's-beak	PDSCR0J0J0	Endangered	Endangered	G1	S1	1B.1
<b><i>Elanus leucurus</i></b> white-tailed kite	ABNKC06010	None	None	G5	S3S4	FP
<b><i>Extriplex joaquinana</i></b> San Joaquin spearscale	PDCHE041F3	None	None	G2	S2	1B.2
<b><i>Hibiscus lasiocarpus</i> var. <i>occidentalis</i></b> woolly rose-mallow	PDMAL0H0R3	None	None	G5T2	S2	1B.2
<b><i>Hypomesus transpacificus</i></b> Delta smelt	AFCHB01040	Threatened	Endangered	G1	S1	
<b><i>Lathyrus jepsonii</i> var. <i>jepsonii</i></b> Delta tule pea	PDFAB250D2	None	None	G5T2	S2	1B.2
<b><i>Lepidurus packardii</i></b> vernal pool tadpole shrimp	ICBRA10010	Endangered	None	G3	S2S3	
<b><i>Lilaeopsis masonii</i></b> Mason's lilaeopsis	PDAP119030	None	Rare	G2	S2	1B.1
<b><i>Lindieriella occidentalis</i></b> California lindieriella	ICBRA06010	None	None	G2G3	S2S3	
<b><i>Oncorhynchus mykiss irideus</i></b> steelhead - Central Valley DPS	AFCHA0209K	Threatened	None	G5T2Q	S2	
<b><i>Sagittaria sanfordii</i></b> Sanford's arrowhead	PMALI040Q0	None	None	G3	S3	1B.2



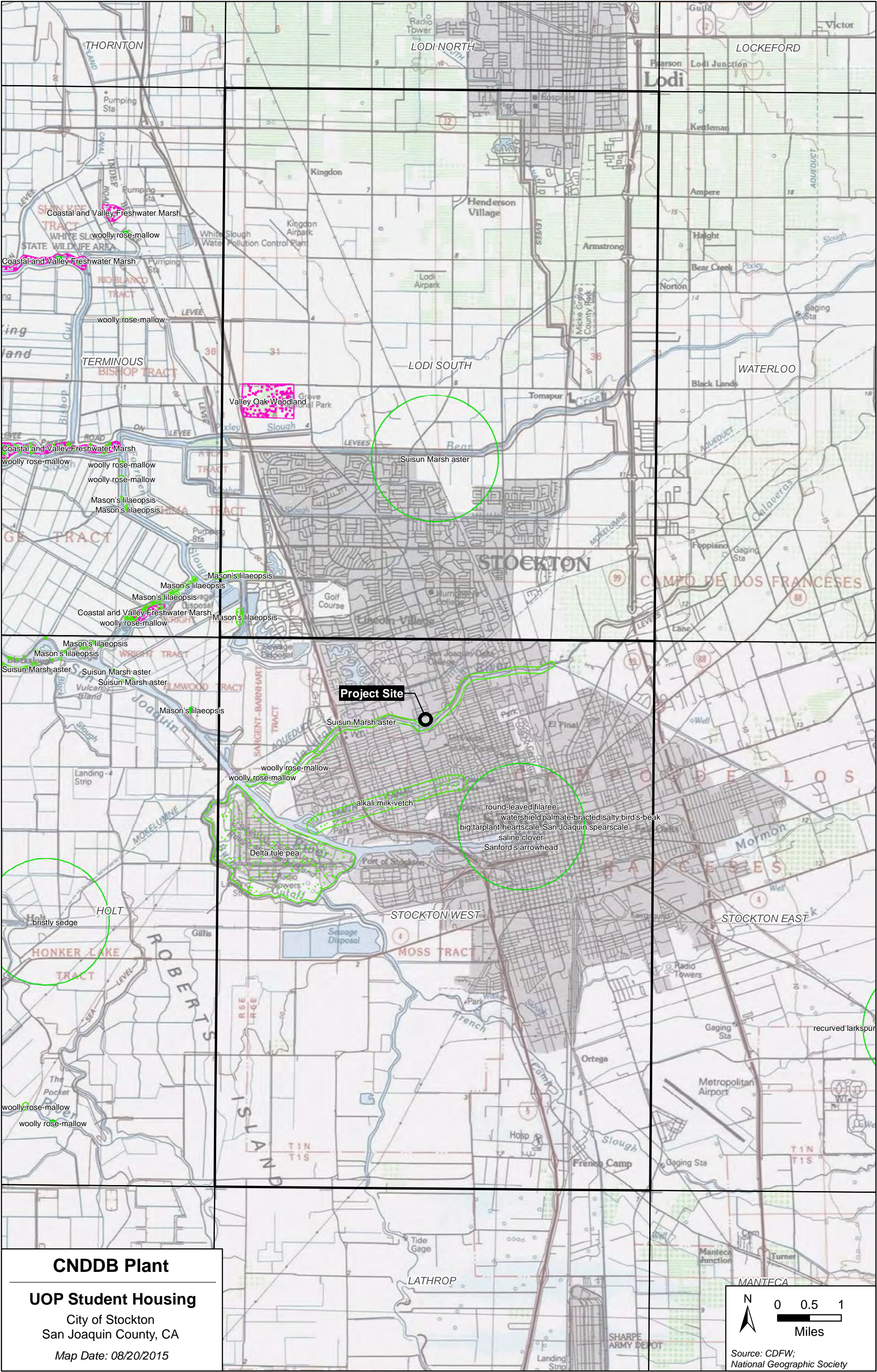
Selected Elements by Scientific Name  
California Department of Fish and Wildlife  
California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<b><i>Spirinchus thaleichthys</i></b> longfin smelt	AFCHB03010	Candidate	Threatened	G5	S1	SSC
<b><i>Symphytotrichum lentum</i></b> Suisun Marsh aster	PDASTE8470	None	None	G2	S2	1B.2
<b><i>Thamnophis gigas</i></b> giant garter snake	ARADB36150	Threatened	Threatened	G2	S2	
<b><i>Trifolium hydrophilum</i></b> saline clover	PDFAB400R5	None	None	G2	S2	1B.2
<b>Valley Oak Woodland</b> Valley Oak Woodland	CTT71130CA	None	None	G3	S2.1	
<b><i>Vireo bellii pusillus</i></b> least Bell's vireo	ABPBW01114	Endangered	Endangered	G5T2	S2	

Record Count: 26





**CNDDDB Plant**

**UOP Student Housing**

City of Stockton  
San Joaquin County, CA

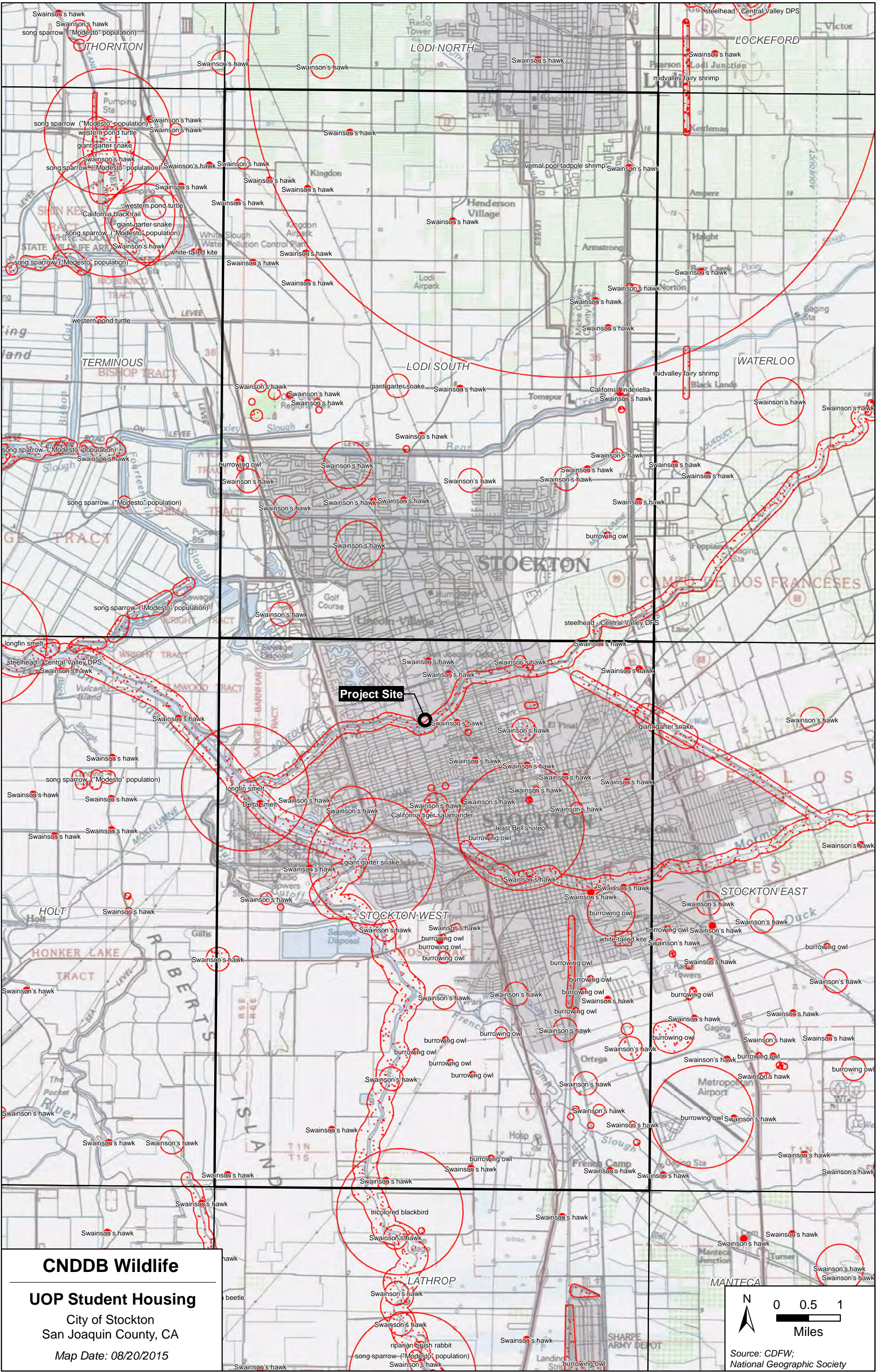
Map Date: 08/20/2015



0 0.5 1  
Miles

Source: CDFW;  
National Geographic Society







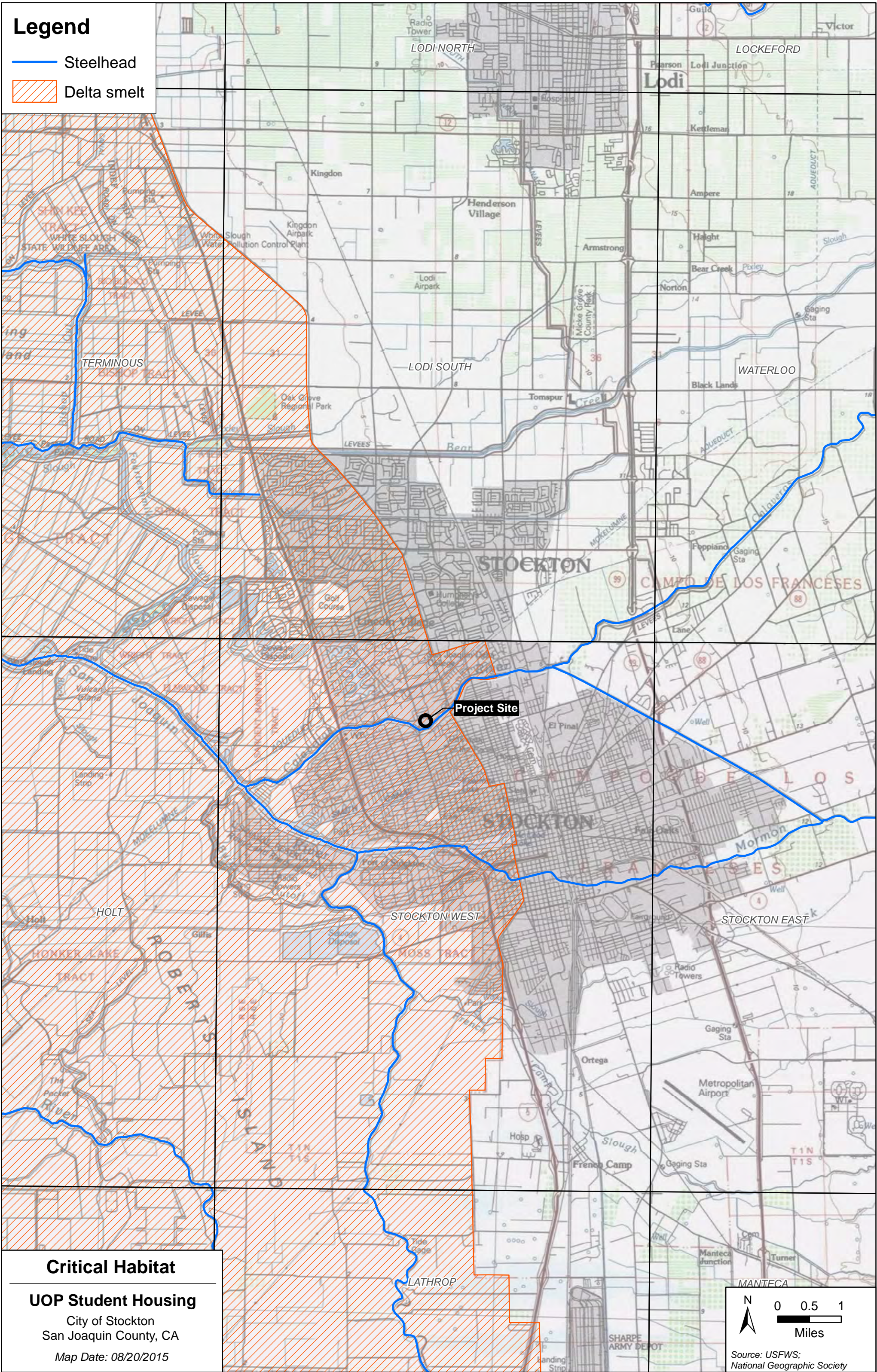
## Appendix C

### Designated Critical Habitat



Legend

- Steelhead
- Delta smelt



Critical Habitat

UOP Student Housing

City of Stockton  
San Joaquin County, CA

Map Date: 08/20/2015



0 0.5 1  
Miles

Source: USFWS;  
National Geographic Society



APPENDIX C  
CULTURAL RESOURCES RECORD SEARCH

# GENESIS SOCIETY

*a Corporation Sole*

7053 MOLOKAI DRIVE  
PARADISE, CALIFORNIA 95969  
(530) 680-6170 VOX  
(530) 876-8650 FAX  
seanjensen@comcast.net

July 27, 2015

## **Basecamp Environmental**

*Attention: Amy Gartin*

6653 Embarcadero Drive, Suite A  
Stockton, CA 95219  
agartin@basecampenv.com

***Subject: Archaeological Records Search, University of the Pacific Upperclassman Apartments Project, Stockton, San Joaquin County, California.***

Dear Ms. Gartin:

Per your direction, we have requested and received a search of archaeological records maintained by the Central California Information Center at CSU-Stanislaus for the proposed University of the Pacific Upperclassman Apartments Project, located within the City of Stockton, San Joaquin County, California. Lands affected are located within a portion of Section 5 of Township 2 North, Range 6 East, as shown on the USGS Stockton West, California, 7.5' series quad.

The Information Center search involved multiple sources and data bases, including:

- The National Register of Historic Places (1986, Supplements to 2014).
- The California Register of Historical Resources (2014).
- The California Inventory of Historic Resources (1976).
- California State Historical Landmarks (1996).
- California Points of Historical Interest (1992).
- OHP Historic Property Data File (2014).
- OHP Archaeological Determination of Eligibility (2014).
- The Survey of Surveys (1989).
- The Caltrans State and Local Bridge Survey (1989 and updates).
- GLO Plats.
- Records of sites and previous archaeological surveys maintained by and available at the Information Center.

Specific results of the Records Search may be summarized as follows:

- **Previous Survey:** According to the information center, all of the present Area of Potential Effects (APE) has been subjected to archaeological survey. Jensen (2011) conducted an archaeological survey for the UOP development project, which included all

of the present APE (SJ-7533). Four investigations have been conducted on lands adjacent, or within close proximity, to the APE.

- **Recorded Sites:** No prehistoric or historic-era resources (sites) have been documented within, or adjacent to the APE.

The GLO Plat map for T2N/R6E identifies the project area within “Lot No. 37 Part of the Rancho Campo de los Franceses.”

Thompson and West (1979) reference the present project area as within the estate of H. Barnhart.

Bridge No. 29C-243 (Pershing Avenue at the Calaveras River), built in 1959 and located wholly outside of the present APE, was evaluated by CALTRANS and is considered not eligible for inclusion on the National Register of Historic Places.

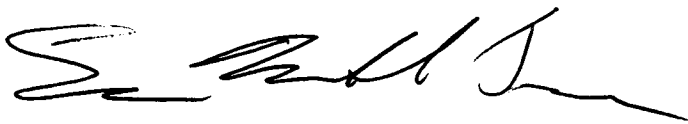
Several references to the identification of prehistoric cultural material (including human burials) have been made on lands immediately south of the Calaveras River, and south of (outside) the present APE.

Based on the information obtained from the Information Center, since 2011 no new investigations have been conducted within the APE. Furthermore, no resources have been identified within the APE. Given the findings of the previous (2011) investigation, coupled with the results of the present records search, it appears that no resources are located within the present APE.

A copy of the complete records search is attached for your records. Note confidentiality requirements with respect to distribution of the records search document from the Central California Information Center.

If you have any questions concerning Information Center results, please don't hesitate to contact me at your earliest convenience.

Sincerely Yours,

A handwritten signature in black ink, appearing to read 'Sean Michael Jensen', with a long horizontal flourish extending to the right.

**Sean Michael Jensen, Administrator**



## CENTRAL CALIFORNIA INFORMATION CENTER

*California Historical Resources Information System*  
Department of Anthropology – California State University, Stanislaus  
One University Circle, Turlock, California 95382  
(209) 667-3307 - FAX (209) 667-3324

---

*Alpine, Calaveras, Mariposa, Merced, San Joaquin, Stanislaus & Tuolumne Counties*

---

**Date:** 7/23/2015

**Records Search File No.:** 9411L

**Re: Project:** UOP (update of 2011 study)

**Access and Use Agreement No.:** 136

Sean M. Jensen  
Genesis Society  
7053 Molokai Drive  
Paradise, CA 95969

Email: seanjensen@comcast.net

The Central California Information Center received your **Priority Response** record search (update) request for the project area referenced above, located on the Stockton West USGS 7.5' quadrangle in San Joaquin County. The following reflects the results of the records search for the project area and area *immediately* adjacent.

As per data currently available at the CCalC, the locations of resources and reports are provided in the following format: ☐ custom GIS maps ☐ shapefiles ☒ hand-drawn maps

### **Summary Data:**

Resources within project area:	0 resources have been reported to the CCalC.
Resources immediately adjacent	0 archaeological sites reported; bridge built in 1959 not eligible for NR
Reports within project area:	1 reported; prepared by S. Jensen
Reports immediately adjacent	3 reported for Calaveras River levee projects

### **Update (new) information only:**

**Resource Database Printout (list):**

☐ enclosed ☐ not requested ☒ nothing new listed

**Resource Database Printout (details):**

☐ enclosed ☐ not requested ☒ nothing new listed

**Resource Digital Database Records:**

☐ enclosed ☐ not requested ☒ nothing new listed

**Resource Record Copies:**

☐ enclosed ☐ not requested ☒ nothing new listed

**Report Database Printout (list):**

Not attached; see summary below

**Report Database Printout (details):**

Not attached; see summary below

**Report Digital Database Records:**

Not attached; see summary below

**Report Copies:**

Not attached; see summary below

**OHP Historic Properties Directory:**

☐ enclosed ☐ not requested ☒ nothing listed

**Archaeological Determinations of Eligibility:**

☐ enclosed ☐ not requested ☒ nothing listed

**CA Inventory of Historic Resources (1976):**

☐ enclosed ☐ not requested ☒ nothing listed

**Caltrans Bridge Survey:**

Reviewed; summary provided; no copy attached

**Ethnographic Information:**

☐ enclosed ☒ not requested ☐ nothing listed

**Historical Literature:**

☐ enclosed ☒ not requested ☐ nothing listed

**Historical Maps:**

1 map attached; see comments below

**Local Inventories:**

☐ enclosed ☒ not requested ☐ nothing listed

**GLO and/or Rancho Plat Maps:**

Previously sent to client; no new copy attached

**Shipwreck Inventory:**

☒ not available at CCIC; please go to

[http://shipwrecks.slc.ca.gov/ShipwrecksDatabase/Shipwrecks\\_Database.asp](http://shipwrecks.slc.ca.gov/ShipwrecksDatabase/Shipwrecks_Database.asp)

**Soil Survey Maps:**

☒ not available at CCIC; please go to

<http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>

The following details the results of the records search:

**Prehistoric or historic resources within the project area:**

- (1) No prehistoric or historic archaeological resources or historic properties have yet been reported to the CCalC.
- (2) Subsequent to your previous record search, only one new historic map has been acquired by the CCalC for this area: the 1883 map of San Joaquin County; copy attached.

**Prehistoric or historic resources within the immediate vicinity of the project area:**

- (1) No prehistoric or historic archaeological resources or historic properties have yet been reported to the CCalC (none at the property's boundary, or immediately adjacent on the north side of the Calaveras River).
- (2) Bridge #29C-243 (N. Pershing over the Calaveras River) is still considered by Caltrans to be ineligible for the NR. The latest Caltrans bridges lists can be viewed online.

**Resources known to have value to local cultural groups:**

None have been formally reported to the CCalC.

**Previous investigations within the project area:**

The only one that has been received subsequent to your previous record search is your own 2011 survey report for this property:

**CCaIC report #**

SJ-7533

**Author/Date**

Jensen (2011)

*Archaeological Inventory Survey, University of the Pacific Development Project, c. 15 Acres, Stockton, San Joaquin County, California.*

**Previous investigations within the immediate vicinity of the project area:**

No others have been reported other than the 3 studies reported to you in the previous search; no copies attached:

<b>CCaIC report #</b>	<b>Author/Date</b>
<b>SJ-</b>	
6507	URS Corp. (2007)
Cultural Resources Report for Geotechnical Evaluations of the San Joaquin Area Flood Control Agency Project Levees.	
6723	URS Corp. (2008)
Cultural Resources Survey Report for the Urban Levee Project.	
6724	URS Corp. (2008)
Cultural Resources Baseline Literature Review for the Urban Levee Project.	

Please forward a copy of any resulting reports from this project to the office as soon as possible. Due to the sensitive nature of archaeological site location data, we ask that you do not include resource location maps and resource location descriptions in your report if the report is for public distribution. If you have any questions regarding the results presented herein, please contact the office at the phone number listed above.

The provision of CHRIS Data via this records search response does not in any way constitute public disclosure of records otherwise exempt from disclosure under the California Public Records Act or any other law, including, but not limited to, records related to archeological site information maintained by or on behalf of, or in the possession of, the State of California, Department of Parks and Recreation, State Historic Preservation Officer, Office of Historic Preservation, or the State Historical Resources Commission.

Due to processing delays and other factors, not all of the historical resource reports and resource records that have been submitted to the Office of Historic Preservation are available via this records search. Additional information may be available through the federal, state, and local agencies that produced or paid for historical resource management work in the search area. Additionally, Native American tribes have historical resource information not in the CHRIS Inventory, and you should contact the California Native American Heritage Commission for information on local/regional tribal contacts.

Should you require any additional information for the above referenced project, reference the record search number listed above when making inquiries. Requests made after initial invoicing will result in the preparation of a separate invoice.

Thank you for using the California Historical Resources Information System (CHRIS).

Sincerely,

Robin Hards, Assistant Research Technician  
Central California Information Center  
California Historical Resources Information System



APPENDIX D  
NOISE IMPACT REPORT

# Environmental Noise Assessment

## UOP Student Housing

City of Stockton, California

Job # 2015-174

Prepared For:

### **BaseCamp Environmental**

6653 Embarcadero Drive, Suite A  
Stockton, CA 95219

Attn: Ms. Amy Gartin

Prepared By:

### **j.c. brennan & associates, Inc.**



Jim Brennan  
President

Member, Institute of Noise Control Engineering

July 27, 2015

 **j.c. brennan & associates**  
*consultants in acoustics*

## INTRODUCTION

The proposed UOP Student Housing project (Proposed Project) is located in the City of Stockton, California. Figures 1 and 2 show the noise measurement locations and the project site plan.

The proposed project would construct housing with 380 beds. The project site is developed and owned by UOP. It is located north of the Calaveras River, east of Pershing Avenue, south of Brookside Road and west of Manchester.

This analysis evaluates the potential for the project to produce noise levels which may exceed the City of Stockton noise level criteria, and the potential for the project to be exposed to noise levels which exceed the City of Stockton noise level criteria.

## FUNDAMENTALS OF ACOUSTICS

Acoustics is the science of sound. Sound may be thought of as mechanical energy of a vibrating object transmitted by pressure waves through a medium to human (or animal) ears. If the pressure variations occur frequently enough (at least 20 times per second), then they can be heard and are called sound. The number of pressure variations per second is called the frequency of sound, and is expressed as cycles per second or Hertz (Hz).

Noise is a subjective reaction to different types of sounds. Noise is typically defined as (airborne) sound that is loud, unpleasant, unexpected or undesired, and may therefore be classified as a more specific group of sounds. Perceptions of sound and noise are highly subjective from person to person.

Measuring sound directly in terms of pressure would require a very large and awkward range of numbers. To avoid this, the decibel scale was devised. The decibel scale uses the hearing threshold (20 micropascals), as a point of reference, defined as 0 dB<sub>1</sub>. Other sound pressures are then compared to this reference pressure, and the logarithm is taken to keep the numbers in a practical range. The decibel scale allows a million-fold increase in pressure to be expressed as 120 dB, and changes in levels (dB) correspond closely to human perception of relative loudness.

The perceived loudness of sounds is dependent upon many factors, including sound pressure level and frequency content. However, within the usual range of environmental noise levels, perception of loudness is relatively predictable, and can be approximated by A-weighted sound levels. There is a strong correlation between A-weighted sound levels (expressed as dBA) and the way the human ear perceives sound. For this reason, the A-weighted sound level has become the standard tool of environmental noise assessment. All noise levels reported in this section are in terms of A-weighted levels, but are expressed as dB, unless otherwise noted.

---

<sup>1</sup> For an explanation of these terms, see Appendix A: "Acoustical Terminology"

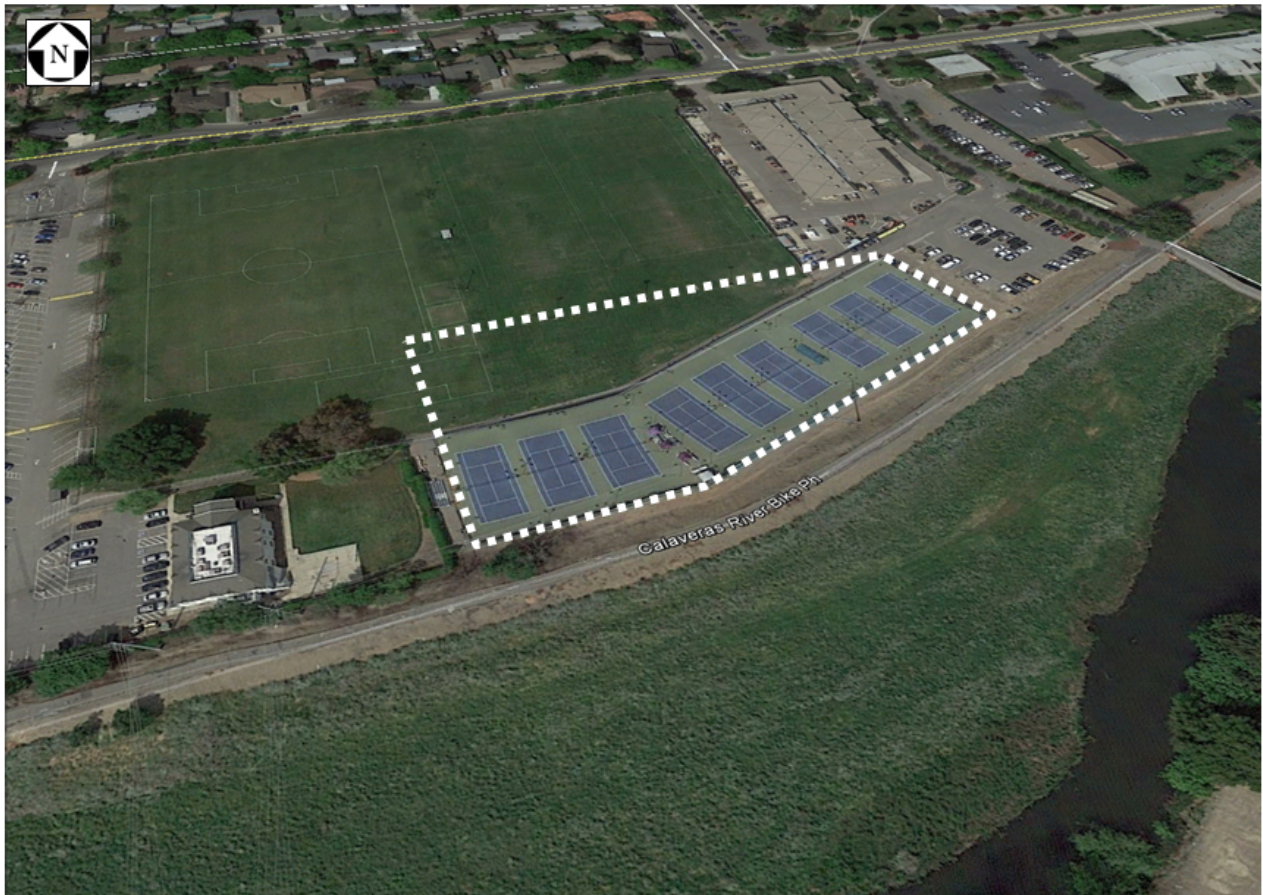
**Figure 1**  
UOP Student Housing  
Project Site and Noise Measurement Locations



j.c. brennan & associates  
consultants in acoustics



**Figure 2**  
UOP Student Housing  
Project Site Plan



j.c. brennan & associates  
consultants in acoustics

The decibel scale is logarithmic, not linear. In other words, two sound levels 10 dB apart differ in acoustic energy by a factor of 10. When the standard logarithmic decibel is A-weighted, an increase of 10 dBA is generally perceived as a doubling in loudness. For example, a 70 dBA sound is half as loud as an 80 dBA sound, and twice as loud as a 60 dBA sound.

Community noise is commonly described in terms of the ambient noise level, which is defined as the all-encompassing noise level associated with a given environment. A common statistical tool to measure the ambient noise level is the average, or equivalent, sound level ( $L_{eq}$ ), which corresponds to a steady-state A weighted sound level containing the same total energy as a time varying signal over a given time period (usually one hour). The  $L_{eq}$  is the foundation of the composite noise descriptor,  $L_{dn}$ , and shows very good correlation with community response to noise.

The day/night average level ( $L_{dn}$ ) is based upon the average noise level over a 24-hour day, with a +10 decibel weighing applied to noise occurring during nighttime (10:00 p.m. to 7:00 a.m.) hours. The nighttime penalty is based upon the assumption that people react to nighttime noise exposures as though they were twice as loud as daytime exposures. Because  $L_{dn}$  represents a 24-hour average, it tends to disguise short-term variations in the noise environment.

Table 1 lists several examples of the noise levels associated with common noise sources.

### **Effects of Noise on People**

The effects of noise on people can be placed in three categories:

- Subjective effects of annoyance, nuisance, and dissatisfaction
- Interference with activities such as speech, sleep, and learning
- Physiological effects such as hearing loss or sudden startling

Environmental noise typically produces effects in the first two categories. Workers in industrial plants can experience noise in the last category. There is no completely satisfactory way to measure the subjective effects of noise or the corresponding reactions of annoyance and dissatisfaction. A wide variation in individual thresholds of annoyance exists and different tolerances to noise tend to develop based on an individual's past experiences with noise.

Thus, an important way of predicting a human reaction to a new noise environment is the way it compares to the existing environment to which one has adapted: the so-called ambient noise level. In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise will be judged by those hearing it.

<b>Table 1</b> <b>Typical Noise Levels</b>		
<b>Common Outdoor Activities</b>	<b>Noise Level (dBA)</b>	<b>Common Indoor Activities</b>
	--110--	Rock Band
Jet Fly-over at 300 m (1,000 ft)	--100--	
Gas Lawn Mower at 1 m (3 ft)	--90--	
Diesel Truck at 15 m (50 ft), at 80 km/hr (50 mph)	--80--	Food Blender at 1 m (3 ft) Garbage Disposal at 1 m (3 ft)
Noisy Urban Area, Daytime Gas Lawn Mower, 30 m (100 ft)	--70--	Vacuum Cleaner at 3 m (10 ft)
Commercial Area Heavy Traffic at 90 m (300 ft)	--60--	Normal Speech at 1 m (3 ft)
Quiet Urban Daytime	--50--	Large Business Office Dishwasher in Next Room
Quiet Urban Nighttime	--40--	Theater, Large Conference Room (Background)
Quiet Suburban Nighttime	--30--	Library
Quiet Rural Nighttime	--20--	Bedroom at Night, Concert Hall (Background)
	--10--	Broadcast/Recording Studio
Lowest Threshold of Human Hearing	--0--	Lowest Threshold of Human Hearing
Source: Caltrans, Technical Noise Supplement, Traffic Noise Analysis Protocol. October 1998.		



With regard to increases in A-weighted noise level, the following relationships occur:

- Except in carefully controlled laboratory experiments, a change of 1 dBA cannot be perceived;
- Outside of the laboratory, a 3 dBA change is considered a just-perceivable difference;
- A change in level of at least 5 dBA is required before any noticeable change in human response would be expected; and
- A 10 dBA change is subjectively heard as approximately a doubling in loudness, and can cause an adverse response.

Stationary point sources of noise – including stationary mobile sources such as idling vehicles – attenuate (lessen) at a rate of approximately 6 dB per doubling of distance from the source, depending on environmental conditions (i.e. atmospheric conditions and either vegetative or manufactured noise barriers, etc.). Widely distributed noises, such as a large industrial facility spread over many acres, or a street with moving vehicles, would typically attenuate at a lower rate.

## **CRITERIA FOR ACCEPTABLE NOISE EXPOSURE**

### **State of California**

The State Building Code, Title 24, Part 2 of the State of California Code of Regulations establishes uniform minimum noise insulation performance standards to protect persons within new buildings which house people, including hotels, motels, dormitories, apartment houses and dwellings other than single-family dwellings.

Title 24 mandates that interior noise levels attributable to exterior sources shall not exceed 45 dB  $L_{dn}$  or CNEL in any habitable room. Title 24 also mandates that for structures containing noise-sensitive uses to be located where the  $L_{dn}$  or CNEL exceeds 60 dB, an acoustical analysis must be prepared to identify mechanisms for limiting exterior noise to the prescribed allowable interior levels. If the interior allowable noise levels are met by requiring that windows be kept close, the design for the structure must also specify a ventilation or air conditioning system to provide a habitable interior environment.

### **City of Stockton Noise Level Standards:**

The City of Stockton adopted a new 2035 General Plan on December 11, 2007, which is in effect at this time. The relevant Goals and Policies are discussed below.

In addition, the City of Stockton Development Code (Chapter 16 of the Municipal Code) establishes the noise performance standards shown in Table 2.

The City of Stockton Development Code also establishes 65 dB  $L_{dn}$  as the maximum allowable exterior noise level standard for residential outdoor activity areas and 45 dB  $L_{dn}$  for interior areas.

### **City of Stockton 2035 General Plan Noise Element:**

The relevant Goals and Policies of the General Plan are provided below.

### **HS-2.2 Noise Compatibility Guidelines**

*The City shall allow the development of noise sensitive land uses (which include, but are not limited to, residential neighborhoods, schools, and hospitals) only in areas where existing or projected noise levels are “acceptable” according to Table HS-11.1 (Table 2 of this report) “Land Use Compatibility for Community Noise Environments.” Noise mitigation measures may be required to reduce noise in outdoor activity areas and interior spaces to achieve these levels.*

#### ***HS-2.5 Mitigating Highway Noise***

*The City shall work with Caltrans to mitigate noise impacts on sensitive receptors near Interstate 5, State Route 99, and other key state roadways by requiring noise buffering or insulation in new construction.*

#### ***HS-2.7 Coordinate with Caltrans***

*The City shall work with Caltrans to mitigate noise impacts on sensitive receptors near State roadways, by requiring noise buffering or insulation in new construction.*

#### ***HS-2.10 Construction Noise***

*The City shall seek to limit the potential noise impacts of construction activities on surrounding land uses.*

#### ***HS-2.11 Limiting Construction Activities***

*The City shall limit construction activities to the hours of 7:00 a.m. to 7:00 p.m., Monday through Saturday. No construction shall occur on Sundays or national holidays without a written permit from the city.*

#### ***HS-2.12 Sound Attenuation Features***

*The City shall require sound attenuation features such as walls, berming, heavy landscaping commercial, industrial, and residential uses reduce noise and vibration impacts.*

#### ***HS-2.13 Noise Buffering***

*The City shall require noise buffering or construction treatments (additional insulation, double paned glass, etc.) in new development that includes noise sensitive uses located near major streets, highways, the airport, railroad tracks, or other significant noise sources.*

#### ***HS-2.14 State Noise Insulation Standards***

*The City shall enforce the State Noise Insulation Standards (California Administrative Code, Title 24) and Chapter 35 of the Uniform Building Code.*

Table 2 (Table 11-1 of the Stockton General Plan)								
Land Use Type		Noise Levels (Ldn)						
		0-55	56-60	61-65	66-70	71-75	75-80	>81
Residential								
Hotels, Motels								
Schools, Libraries, Churches, Hospitals, Extended Care Facilities								
Auditoriums, Concert Halls, Amphitheaters								
Sports Arenas, Outdoor Spectator Sports								
Playgrounds, Neighborhood Parks								
Golf Courses, Riding Stables, Water Recreation, Cemeteries								
Office Buildings, Business Commercial and Professional								
Mining, Industrial, Manufacturing, Utilities, Agriculture								
		Normally Acceptable. Specified land use is satisfactory, based on the assumption that any buildings involved are of normal, conventional construction, without any special noise insulation requirements.						
		Conditionally Acceptable. New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed insulation features have been included in the design.						
		Unacceptable. New construction or development should not be undertaken.						
If existing noise standards are currently exceeded, a proposed project shall not incrementally increase noise levels by more than 3 dBA								

Based upon the Table 2 information, the Noise Element establishes acceptable noise exposure limits of 60-70 dB Ldn for residential uses and 70 dB Ldn for neighborhood playgrounds and neighborhood parks. However, the Stockton Development Code specifies 65 dB Ldn as the maximum allowable exterior noise level for residential uses.

### City of Stockton Municipal Code:

The City of Stockton Municipal Code Chapter 16, Development Code contains performance standards for new developments, shown in Table 3. Noise affecting the proposed residential uses must be mitigated to the standards shown in Table 3 for stationary or non-transportation noise sources.

<b>Table 3</b> <b>Exterior Hourly Noise Level Standards for Stationary Noise Sources</b> <b>City of Stockton Development Code</b>		
Noise Level Descriptor	Maximum Acceptable Noise Level	
	Daytime (7 am - 10 pm)	Nighttime (10 pm - 7 am)
Hourly Leq, dBA	55	45
Maximum Level (Lmax), dBA	75	65
<i>* Each of the noise level standards specified above shall be reduced by five dBA for simple tone, noise consisting primarily of speech or music, or recurring impulsive noises.</i> <i>Source: City of Stockton Development Code, Table 3-7</i>		

### Standards Applicable to this Project

The proposed project would be subject to an exterior noise level standard of 65 dB Ldn and an interior noise level standard of 45 dB Ldn. Additionally, the criteria in Table 2 would also apply to the proposed project for non-transportation noise sources affecting the project.

Additionally, the project would be subject to an exterior noise level standard of 70 dB Ldn in outdoor activity areas of playgrounds and neighborhood parks, as specified in the General Plan Noise Element.

### EXISTING NOISE ENVIRONMENT

As a means of determining the typical background noise environment in the project vicinity, j.c. brennan & associates, Inc. utilized noise level measurement data collected for the Crown & Pershing Sanitary Sewer Project, conducted in 2014. Table 4 shows the results of the noise measurements, and Appendix B graphically shows the results of the continuous 24-hour noise measurement data.

TABLE 4 SUMMARY OF AMBIENT NOISE MEASUREMENT DATA UOP STUDENT HOUSING								
Site	Location	L <sub>dn</sub>	Average Measured Hourly Noise Levels, dBA					
			Daytime (7am-10pm)			Nighttime (10pm-7am)		
			L <sub>eq</sub>	L <sub>50</sub>	L <sub>max</sub>	L <sub>eq</sub>	L <sub>50</sub>	L <sub>max</sub>
Continuous (24-hour) Noise Level Measurements								
A	4110 Crown Avenue, 156 feet to Pershing Avenue centerline	57.7	57.1	50.6	77.5	48.7	46.2	58.9
Short-term Noise Level Measurements								
1	East of Project	NA	54.6	54.5	58.9	@ 12:15 p.m.		
2	North of River on Levee Trail	NA	56.3	55.4	63.7	@ 2:15 p.m.		
Source: j.c. brennan & associates, Inc., 2014.								

## IMPACTS

### On-Site Activities

Activities in the open areas or a designated courtyard are not expected to be associated with any organized sporting events. The new housing is not expected to result in a significant increase in the number of individuals outside at the site. However, individuals will gather in groups to participate in basketball, tossing footballs or frisbees, etc. According to Leo Beranek (*Noise and Vibration Control, Leo Beranek, Bolt Beranek and Newman, 1972*), A male voice with a voice effort of "very loud" is approximately 58 dBA at a distance of 12 feet. Assuming 20 individuals were talking in a "very loud" voice effort, the overall sound level would be 71 dBA. Assuming the nearest residences to the housing area are over 400 feet away, the overall noise level from the 20 individuals would be approximately 33 dBA L<sub>max</sub>, and less than 33 dBA L<sub>eq</sub>. This would comply with the City of Stockton daytime noise level standards of 75 dBA L<sub>max</sub> and 55 dBA L<sub>eq</sub>, and the nighttime standards of 65 dBA L<sub>max</sub> and 45 dBA L<sub>eq</sub>.

### Construction Noise

Activities involved in project construction would typically generate maximum noise levels ranging from 76 to 90 dB at a distance of 50 feet. The nearest sensitive receptor would be located 400 feet to north from on-site construction activities. At 400 feet, construction related activities are predicted to generate maximum noise levels ranging between 58-72 dB L<sub>max</sub> as shown in Table 5.

<b>Table 5</b> <b>Construction Equipment Noise</b>						
Type of Equipment	Predicted Noise Levels, Lmax dB				Distances to Noise Contours (feet)	
	Noise Level at 50'	Noise Level at 100'	Noise Level at 200'	Noise Level at 400'	70 dB Lmax contour	65 dB Lmax contour
Backhoe	78	72	66	60	126	223
Compactor	83	77	71	65	223	397
Compressor (air)	78	72	66	60	126	223
Concrete Saw	90	84	78	72	500	889
Dozer	82	76	70	64	199	354
Dump Truck	76	70	64	58	100	177
Excavator	81	75	69	63	177	315
Generator	81	75	69	63	177	315
Jackhammer	89	83	77	71	446	792
Pneumatic Tools	85	79	73	67	281	500

Source: Roadway Construction Noise Model User's Guide. Federal Highway Administration. FHWA-HEP-05-054. January 2006. j.c. brennan & associates, Inc. 2012.

Provided that the construction activities are limited to hours of operations as shown below and contained within the General Plan Noise Element, the construction noise impacts are considered to be in compliance with the city standards.

### **HS-2.11 Limiting Construction Activities**

*The City shall limit construction activities to the hours of 7:00 a.m. to 7:00 p.m., Monday through Saturday. No construction shall occur on Sundays or national holidays without a written permit from the city.*

### **Construction Vibration**

The primary vibration-generating activities associated with the proposed project would occur during construction when activities such as grading, utilities placement, and parking lot construction occur. Sensitive receptors are located over 400 feet from the project site. At distances over 100 feet, construction vibrations are not predicted to exceed acceptable levels. Additionally, construction activities would be temporary in nature and would likely occur during normal daytime working hours.

Construction vibration impacts include human annoyance and building structural damage. Human annoyance occurs when construction vibration rises significantly above the threshold of perception. Building damage can take the form of cosmetic or structural. Table 6 shows the typical vibration levels produced by construction equipment.

<b>Table 6</b> <b>Vibration Levels for Various Construction Equipment</b>		
Type of Equipment	Peak Particle Velocity @ 25 feet (inches/second)	Peak Particle Velocity @ 100 feet (inches/second)
Large Bulldozer	0.089	0.011
Loaded Trucks	0.076	0.010
Small Bulldozer	0.003	0.000
Auger/drill Rigs	0.089	0.011
Jackhammer	0.035	0.004
Vibratory Hammer	0.070	0.009
Vibratory Compactor/roller	0.210	0.026

*Source: Federal Transit Administration, Transit Noise and Vibration Impact Assessment Guidelines, May 2006*

The Table 6 data indicate that construction vibration levels anticipated for the project are less than the 0.2 in/sec p.p.v. threshold of damage to buildings and less than the 0.1 in/sec threshold of annoyance criteria at distances of 100 feet. Therefore, construction vibrations are not predicted to cause damage to existing buildings or cause annoyance to sensitive receptors.

### **Traffic Noise Levels at the Project Site**

The nearest primary roadway to the student housing is Pershing Avenue, which is approximately 550 feet from the proposed housing. Based upon Table 4 which shows the measured background noise levels at Site A ( Crown Avenue, 156 feet from Pershing Avenue), the worst case Pershing Avenue noise level would be less than 50 dB Ldn. This would comply with the City of Stockton General Plan noise level criteria for residential uses.



## Appendix A

### Acoustical Terminology

<b>Acoustics</b>	The science of sound.
<b>Ambient Noise</b>	The distinctive acoustical characteristics of a given space consisting of all noise sources audible at that location. In many cases, the term ambient is used to describe an existing or pre-project condition such as the setting in an environmental noise study.
<b>Attenuation</b>	The reduction of an acoustic signal.
<b>A-Weighting</b>	A frequency-response adjustment of a sound level meter that conditions the output signal to approximate human response.
<b>Decibel or dB</b>	Fundamental unit of sound, A Bell is defined as the logarithm of the ratio of the sound pressure squared over the reference pressure squared. A Decibel is one-tenth of a Bell.
<b>CNEL</b>	Community Noise Equivalent Level. Defined as the 24-hour average noise level with noise occurring during evening hours (7 - 10 p.m.) weighted by a factor of three and nighttime hours weighted by a factor of 10 prior to averaging.
<b>Frequency</b>	The measure of the rapidity of alterations of a periodic signal, expressed in cycles per second or hertz.
<b>Ldn</b>	Day/Night Average Sound Level. Similar to CNEL but with no evening weighting.
<b>Leq</b>	Equivalent or energy-averaged sound level.
<b>Lmax</b>	The highest root-mean-square (RMS) sound level measured over a given period of time.
<b>L(n)</b>	The sound level exceeded a described percentile over a measurement period. For instance, an hourly L50 is the sound level exceeded 50% of the time during the one hour period.
<b>Loudness</b>	A subjective term for the sensation of the magnitude of sound.
<b>Noise</b>	Unwanted sound.
<b>Peak Noise</b>	The level corresponding to the highest (not RMS) sound pressure measured over a given period of time. This term is often confused with the "Maximum" level, which is the highest RMS level.
<b>RT<sub>60</sub></b>	The time it takes reverberant sound to decay by 60 dB once the source has been removed.
<b>Sabin</b>	The unit of sound absorption. One square foot of material absorbing 100% of incident sound has an absorption of 1 sabin.
<b>Threshold of Hearing</b>	The lowest sound that can be perceived by the human auditory system, generally considered to be 0 dB for persons with perfect hearing.
<b>Threshold of Pain</b>	Approximately 120 dB above the threshold of hearing.
<b>Impulsive</b>	Sound of short duration, usually less than one second, with an abrupt onset and rapid decay.
<b>Simple Tone</b>	Any sound which can be judged as audible as a single pitch or set of single pitches.

**Appendix B**

2015-174 UOP Student Housing

24hr Continuous Noise Monitoring - Site A

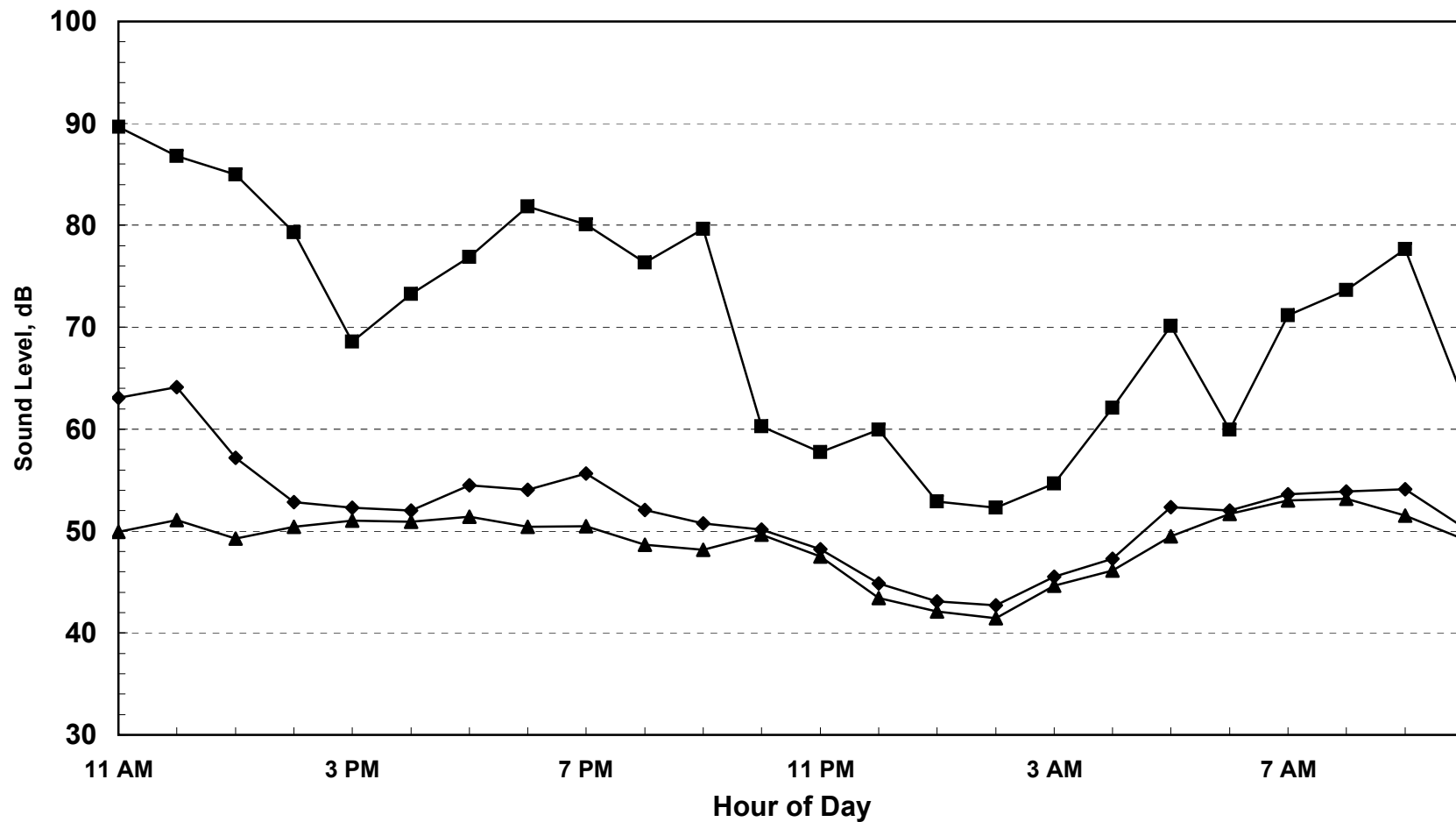
Wednesday, January 8, 2014 - Thursday, January 9, 2014

Hour	Leq	Lmax	L50	L90
11:00	63	90	50	46
12:00	64	87	51	46
13:00	57	85	49	45
14:00	53	79	50	46
15:00	52	69	51	47
16:00	52	73	51	47
17:00	55	77	51	47
18:00	54	82	50	47
19:00	56	80	50	47
20:00	52	76	49	45
21:00	51	80	48	45
22:00	50	60	50	47
23:00	48	58	47	45
0:00	45	60	43	41
1:00	43	53	42	40
2:00	43	52	41	39
3:00	46	55	45	42
4:00	47	62	46	42
5:00	52	70	49	46
6:00	52	60	52	49
7:00	54	71	53	51
8:00	54	74	53	51
9:00	54	78	52	48
10:00	50	63	49	45

Statistical Summary						
Daytime (7 a.m. - 10 p.m.)			Nighttime (10 p.m. - 7 a.m.)			
	High	Low	Average	High	Low	Average
Leq (Average)	64.1	50.3	57.1	52.4	42.7	48.7
Lmax (Maximum)	89.7	63.0	77.5	70.1	52.3	58.9
L50 (Median)	53.2	48.2	50.6	51.7	41.5	46.2
L90 (Background)	51.3	44.7	46.9	49.4	39.2	43.4

Computed Ldn, dB	57.7
% Daytime Energy	92%
% Nighttime Energy	8%

**Figure 2**  
2015-174 UOP Student Housing  
24hr Continuous Noise Monitoring - Site A  
Wednesday, January 8, 2014 - Thursday, January 9, 2014



Ldn = 57.7 dB

◆ Leq    ■ Lmax    ▲ L50

APPENDIX E  
TRAFFIC IMPACT ANALYSIS  
(includes parking analysis)

**TRAFFIC IMPACT STUDY**  
**FOR**  
**THE UNIVERSITY OF THE PACIFIC**  
**STUDENT HOUSING PROJECT**

Stockton, California

Prepared For:

**BaseCamp Environmental**

Prepared By:

**KD Anderson & Associates**  
3853 Taylor Road, Suite G  
Loomis, California 95650  
(916) 660-1555

October 2, 2015

0780-03  
UOP Student Housing TIS 10-2-15.doc

***KD Anderson & Associates, Inc.***

---

**Transportation Engineers**

# TRAFFIC IMPACT STUDY FOR THE UNIVERSITY OF THE PACIFIC STUDENT HOUSING PROJECT

## TABLE OF CONTENTS

---

---

<b>EXECUTIVE SUMMARY .....</b>	<b>i</b>
<b>INTRODUCTION.....</b>	<b>1</b>
Project Location.....	1
Project Description .....	1
Overall Analysis Approach .....	2
<b>EXISTING SETTING .....</b>	<b>8</b>
Study Area Roadways .....	8
Public Transportation .....	10
Carpooling and Vanpooling .....	14
Park and Ride Facilities .....	14
Bicycle and Pedestrian Systems .....	14
Study Area Intersections .....	17
Study Area Roadway Segments .....	17
Accidents .....	20
Methodology .....	20
Level of Service Significance Threshold .....	25
Existing Parking Conditions .....	27
Existing Intersection Traffic Volumes and Levels of Service .....	31
Existing Roadway Segment Traffic Volumes and Levels of Service .....	35
<b>EXISTING PLUS APPROVED PROJECTS NO UOP STUDENT HOUSING</b>	
<b>PROJECT CONDITIONS .....</b>	<b>37</b>
Traffic Volume Forecasts .....	37
Roadway Improvements .....	37
Intersection Levels of Service .....	40
Roadway Segment Levels of Service .....	40
<b>EXISTING PLUS APPROVED PROJECTS PLUS UOP STUDENT HOUSING</b>	
<b>PROJECT IMPACTS .....</b>	<b>42</b>
Trip Generation .....	42
Trip Distribution .....	48
Roadway Improvements .....	52
Trip Assignment .....	52
Intersection Levels of Service .....	52
Roadway Segment Levels of Service .....	52
Increase in Demand for Parking .....	57
Increase in Demand for Transit .....	61
Increase in Demand for Bicycle and Pedestrian Facilities .....	61
Site Circulation and Access .....	61

## TABLE OF CONTENTS (cont'd)

---

<b>CUMULATIVE NO PROJECT CONDITIONS .....</b>	<b>63</b>
Traffic Volume Forecasts .....	63
Roadway Improvements .....	66
Intersection Levels of Service .....	66
Roadway Segment Levels of Service .....	66
<b>CUMULATIVE PLUS PROJECT IMPACTS .....</b>	<b>68</b>
Intersection Levels of Service .....	68
Roadway Segment Levels of Service .....	73
<b>REFERENCES .....</b>	<b>74</b>
<b>TECHNICAL APPENDICES .....</b>	<b>76</b>

---



## LIST OF TABLES

Table Number	Page Number
1	Intersection Level of Service Definitions ..... 22
2	City of Stockton General Plan Roadway Segment Level of Service Thresholds ..... 24
3	Intersection Level of Service - Existing Conditions ..... 33
4	Roadway Segment Level of Service - Existing Conditions ..... 36
5	Roadway Segment Level of Service - EPAP No Project Conditions ..... 39
6	Intersection Level of Service - EPAP No Project Conditions ..... 41
7	Measured Trip Generation at University Townhouse Apartments and Theta Chi Fraternity ..... 44
8	Comparison of Student Housing Trip Generation Rates ..... 45
9	UOP Student Housing Project Trip Generation Rates..... 46
10	UOP Student Housing Project Trip Generation Estimates ..... 47
11	UOP Student Housing Project Trip Distribution Percentages ..... 49
12	Roadway Segment Level of Service - EPAP Plus Project Conditions ..... 55
13	Intersection Level of Service - EPAP Plus Project Conditions ..... 56
14	Parking Demand Rates..... 59
15	Parking Demand and Supply..... 60
16	Roadway Segment Level of Service – Cumulative No Project Conditions..... 65
17	Intersection Level of Service – Cumulative No Project Conditions..... 67
18	Roadway Segment Level of Service – Cumulative Plus Project Conditions..... 71
19	Intersection Level of Service – Cumulative Plus Project Conditions..... 72

## LIST OF FIGURES

Figure Number	Page Number
1 Regional Location .....	3
2 Vicinity Map .....	4
3 Study Area.....	5
4 University of the Pacific Campus Map .....	6
5 Site Plan .....	7
6 Existing Transit System .....	12
7 2035 Stockton General Plan Future Transit Network.....	13
8 Existing and Future Bikeway Plan.....	16
9 Study Intersections.....	18
10 Study Roadway Segments.....	19
11 Existing Traffic Volumes and Lane Configurations.....	32
12 Existing Plus Approved Projects No UOP Student Housing Project Traffic Volumes and Lane Configurations.....	38
13 Existing Plus Approved Projects Plus Project Trip Distribution Percentages.....	50
14 Cumulative Plus Project Trip Distribution Percentages .....	51
15 Project-Related Trips for Existing Plus Approved Projects Background.....	53
16 Existing Plus Approved Projects Plus UOP Student Housing Project Conditions Traffic Volumes and Lane Configurations .....	54
17 Cumulative No UOP Student Housing Project Conditions Traffic Volumes and Lane Configurations.....	64
18 Project-Related Trips for Cumulative Background .....	69
19 Cumulative Plus UOP Student Housing Project Conditions Traffic Volumes and Lane Configurations.....	70

## **EXECUTIVE SUMMARY**

This *Executive Summary* is a brief overview of the analysis presented in this traffic impact study. It is not intended to be a comprehensive description of the analysis. For more details, the reader is referred to the full description presented in the traffic impact study.

This traffic impact study presents an analysis of the traffic-related effects of the University of the Pacific (UOP) Student Housing project. The project site is located in Stockton, east of Pershing Avenue, west of Pacific Avenue, south of Brookside Road, and north of the Calaveras River. The proposed project includes housing for UOP students. The project would include space for 381 beds and supporting facilities.

This traffic impact study includes analysis of:

- seven intersections, and
- seven roadway segments.

These study facilities are analyzed under the following five development scenarios:

- Existing Conditions,
- Near-Term Future Existing Plus Approved Projects (EPAP) No UOP Student Housing Project Conditions,
- Near-Term Future EPAP Plus UOP Student Housing Project Conditions,
- Long-Term Future Cumulative No UOP Student Housing Project Conditions, and
- Long-Term Future Cumulative Plus UOP Student Housing Project Conditions.

Under Existing conditions, all the study facilities experience operating conditions which are considered acceptable. One intersection experiences a long vehicle queue during the peak hours, and this traffic impact study presents recommended improvements for this intersection.

Under EPAP No UOP Student Housing Project conditions, all the study intersections and six of the seven study roadway segments would experience operating conditions which are considered acceptable. One roadway segment would experience operating conditions which are considered unacceptable. Improvements which would be needed on this roadway segment to achieve acceptable operations are considered not feasible. Therefore, the operating conditions on this roadway segment are considered unacceptable and unavoidable.

Under EPAP Plus UOP Student Housing Project conditions, all the study intersections and six of the seven study roadway segments would experience operating conditions which are considered acceptable. One roadway segment would experience operating conditions which are considered

unacceptable, however the project-related impact is considered less than significant. Therefore, the impact of the UOP Student Housing project on study intersections and roadway segments with EPAP background conditions is considered less than significant.

Under Cumulative No UOP Student Housing Project conditions, all of the study facilities would experience operating conditions which are considered acceptable.

Under Cumulative Plus UOP Student Housing Project conditions, all of the study facilities would experience operating conditions which are considered acceptable. Therefore, the impact of the project on study intersections and roadway segments with Cumulative background conditions is considered less than significant.

In addition to presenting an analysis of traffic operating conditions, this traffic impact study also presents analysis of project-related impacts on the following topics:

- demand for parking,
- demand for public transit services,
- demand for bicycle and pedestrian facilities, and
- site circulation and access.

The impact of the proposed project was found to be less than significant on the four topics listed above.

## **INTRODUCTION**

This traffic impact study presents an analysis of the traffic-related effects of the proposed UOP Student Housing project.

### **PROJECT LOCATION**

The project site is located in the City of Stockton. **Figure 1** shows the regional location of the project site. As shown in **Figure 2** and **Figure 3**, within Stockton the project site is located east of Pershing Avenue, west of Pacific Avenue, south of Brookside Road, and north of the Calaveras River.

**Figure 4** shows a map of the campus of UOP. The project site is located in the area currently occupied by the Hal Nelson tennis courts, parking lot 13, and a portion of Brookside Field.

As also shown in **Figure 4**, north of the project site is Brookside Field, which is an athletic field. West of the project site are the University Townhouse Apartments, parking lots 14 and 29, and the Theta Chi fraternity house. East of the project site are parking lot 18, and the physical plant facilities, which includes support services, duplicating, central receiving, and mail services. South of the project site are the Calaveras River and, a pedestrian bridge over the river, connecting the project site with the majority of the UOP campus.

### **PROJECT DESCRIPTION**

The UOP Student Housing Project proposes to construct housing facilities for UOP students and parking to serve the student housing. **Figure 5** shows a site plan for the proposed project. The project would include:

- 381 new student housing beds,
- increasing the number of parking spaces in lots 14 and 29 from 153 spaces to 314 spaces,
- pedestrian and bicycle access to the bridge over the Calaveras River, and
- vehicle access to Brookside Road.

The UOP Student Housing Project would include an additional parking area adjacent to the east side of parking lot 14. Parking demand from the proposed project would be met, in part, by the existing parking area, which would be restriped and enlarged to address project-related demand.

The UOP Student Housing Project includes on-site pedestrian and bicycle pathways connecting the new housing to the bridge over the Calaveras River and to parking facilities. The bridge over the Calaveras River provides the project site with direct access to the majority of the UOP campus.

Vehicle access to the new parking spaces would be provided by the existing driveway on Brookside Road that serves parking lot 14. Parking lot 14 serves the University Townhouse Apartments, and the driveway is referred to in this traffic impact study as the University Townhouse Apartments driveway.

## **OVERALL ANALYSIS APPROACH**

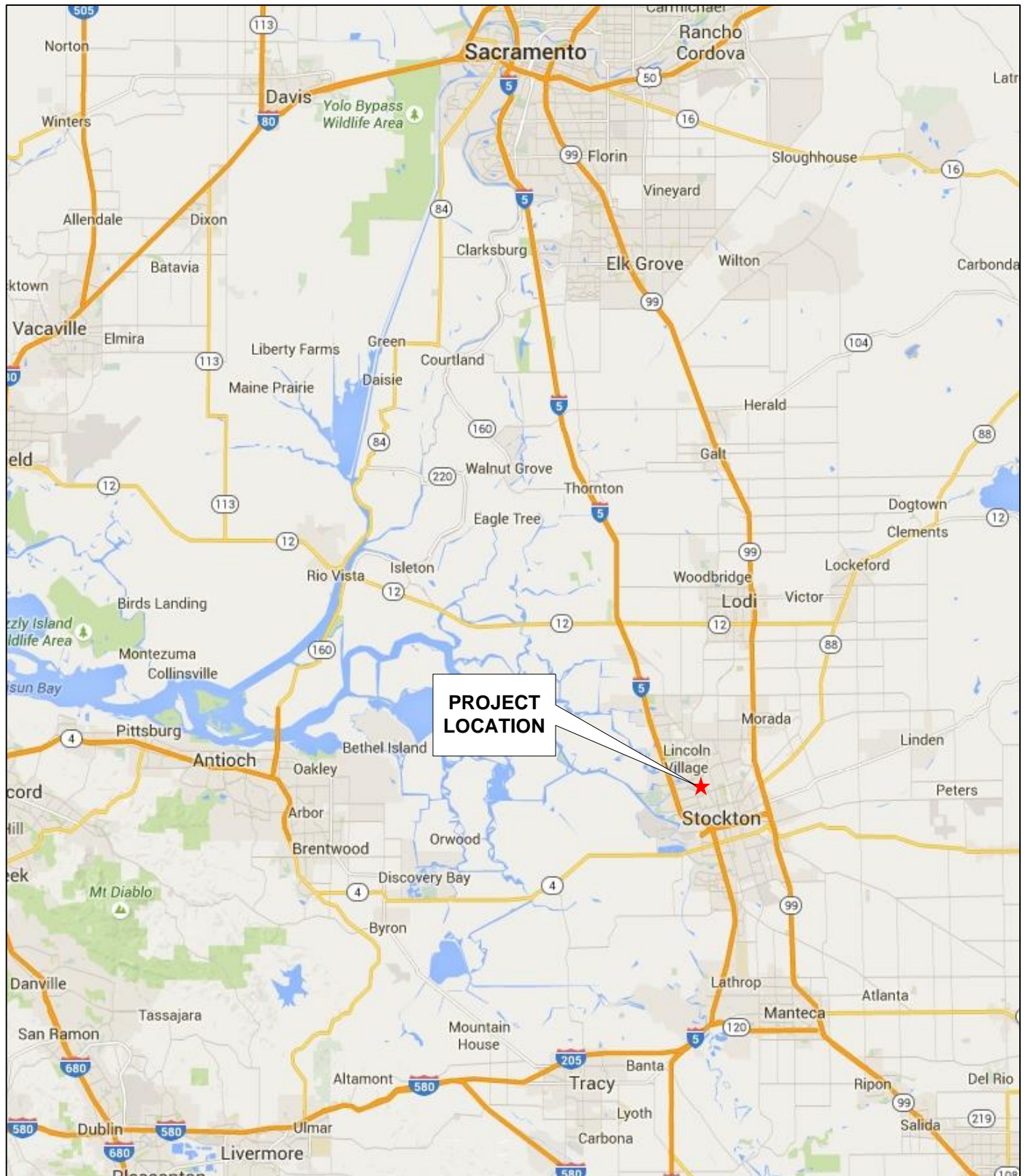
As noted above, this traffic impact study presents an analysis of the traffic-related effects of the UOP Student Housing Project. This analysis is conducted using near-term background conditions and long-term future background conditions. Long-term future background conditions are based on the City of Stockton General Plan. Analysis of traffic operating conditions under the following five scenarios is presented in this traffic impact study:

- Existing Conditions,
- EPAP No UOP Student Housing Project,
- EPAP Plus UOP Student Housing Project,
- Cumulative No Project, and
- Cumulative Plus Project.

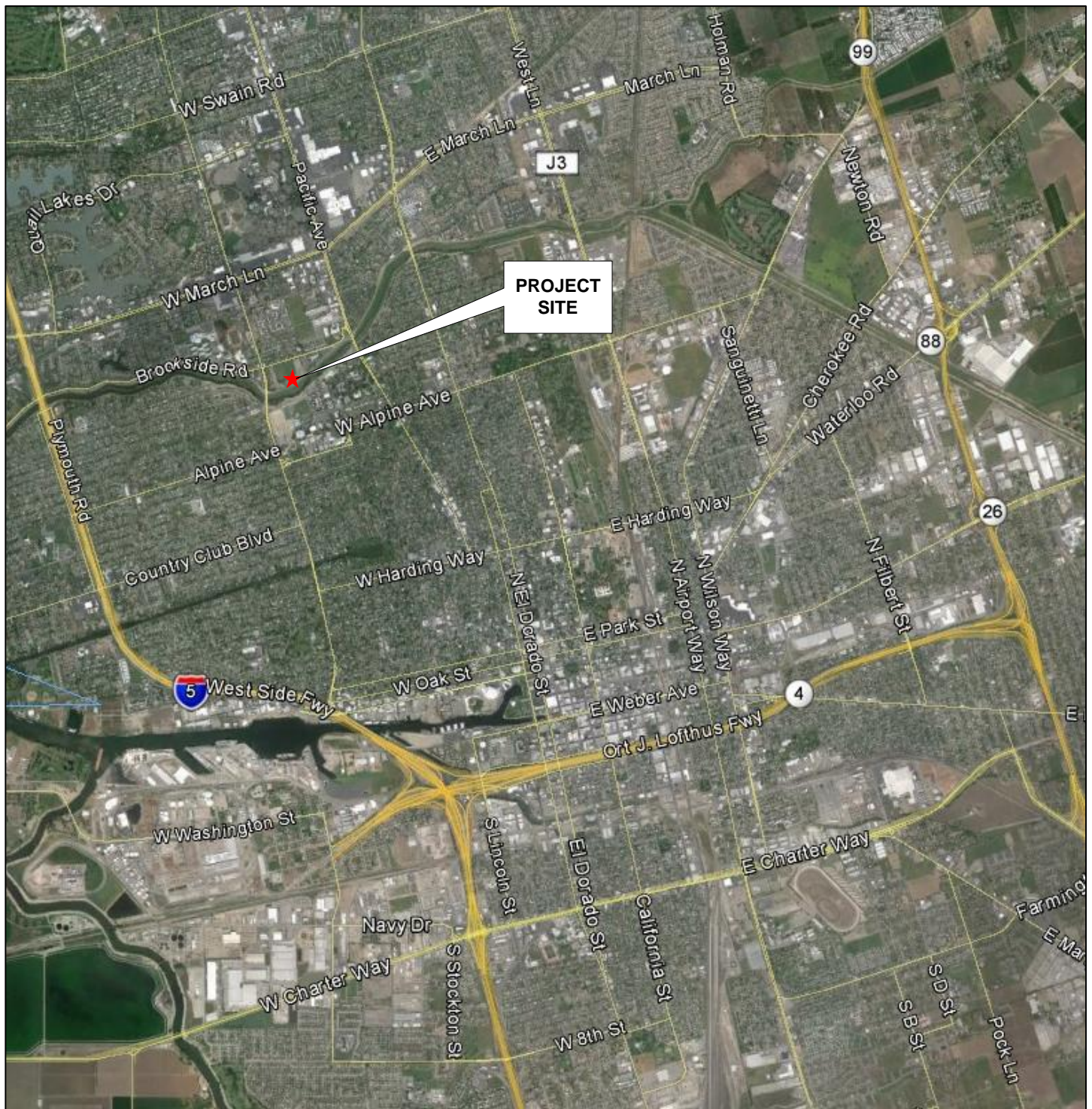
EPAP conditions are a near-term future background condition which includes existing traffic levels, and traffic associated with approved but unconstructed development projects throughout Stockton.

Cumulative conditions with the City's General Plan are a long-term future background condition which includes future year forecasts of traffic volumes, based on development of surrounding land uses and the roadway network. This set of scenarios assumes 2035 conditions with future development consistent with the General Plan.



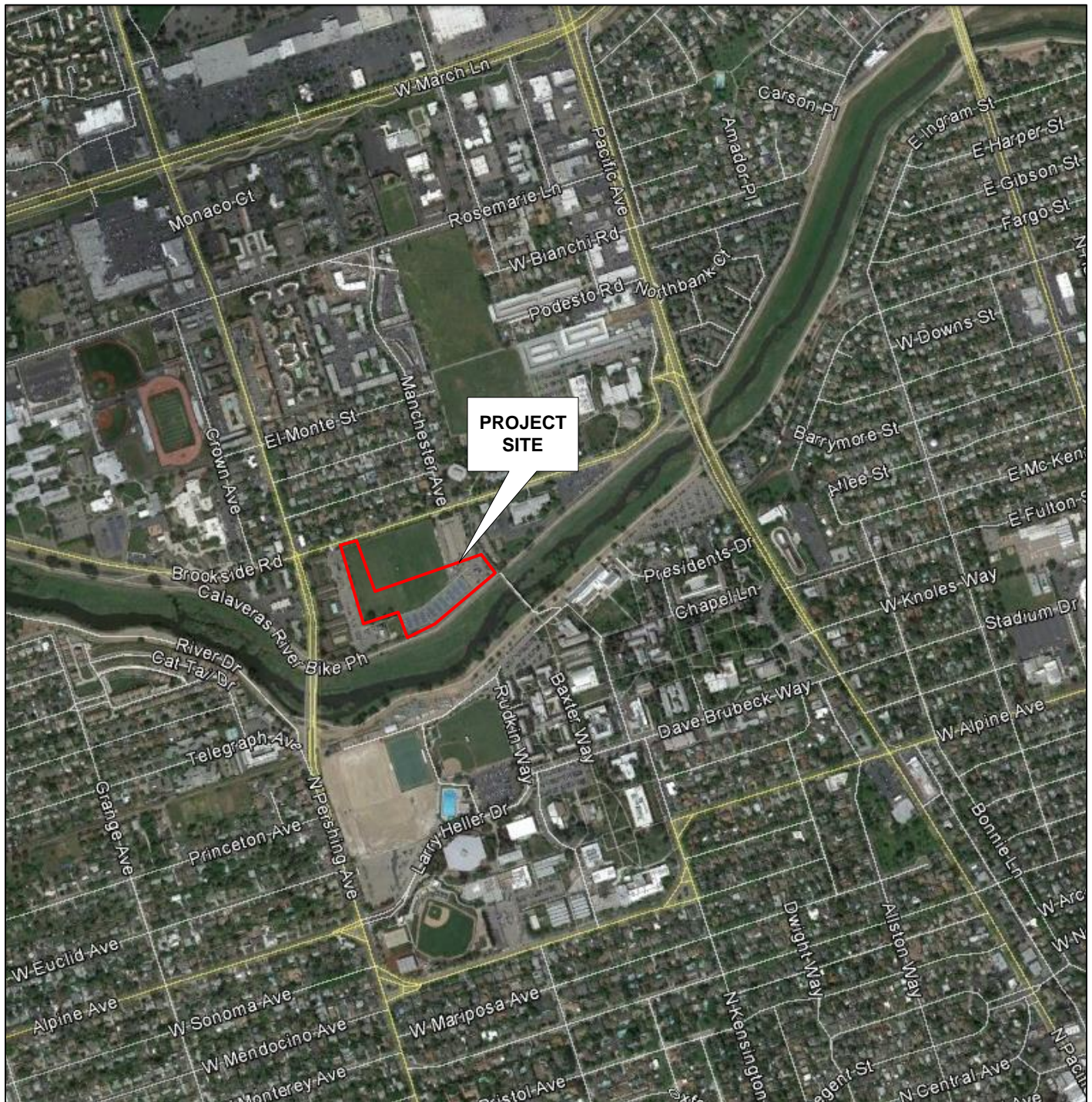






## VICINITY MAP

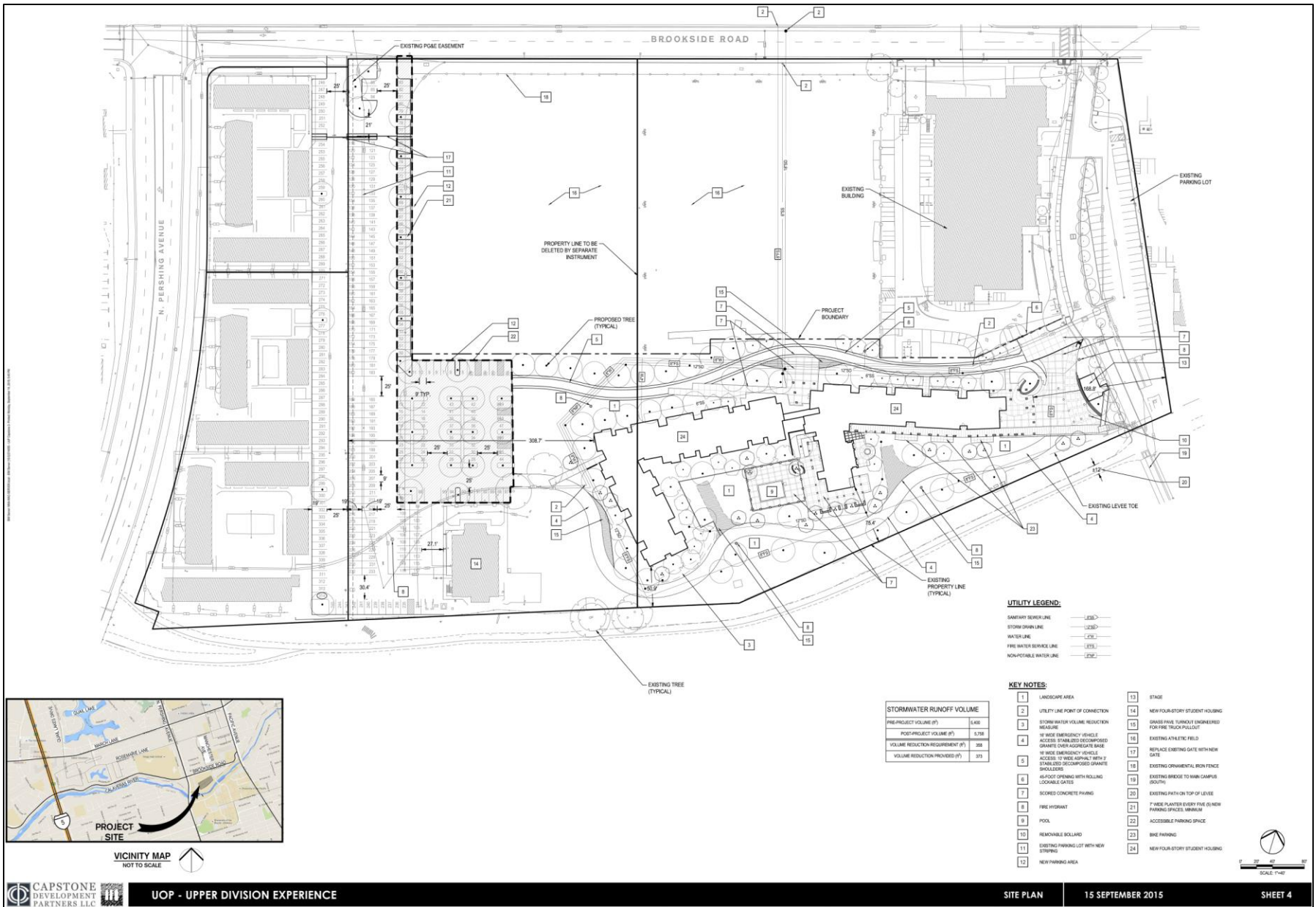




## STUDY AREA







## **EXISTING SETTING**

This section of this traffic impact study presents a description of existing conditions in the study area. Information presented in this section of the study is based on on-site field observations, traffic volume count data collected for this study, and other data available from local and state agencies. Portions of the information presented below are from the *City of Stockton General Plan Background Report* (City of Stockton 2007a).

This section of the traffic impact study also describes analysis methods applied for this study, and thresholds used to determine the significance of project-related effects.

## **STUDY AREA ROADWAYS**

This traffic impact study presents analyses of traffic operating conditions at intersections and on roadways in the study area that may be affected by the proposed project. The limits of the study area were identified through discussions with City of Stockton staff (McDowell pers. comm.).

The following is a description of roadways that provide access to the project site. These roadways are shown in **Figure 1**, **Figure 2**, and **Figure 3**.

**Brookside Road** is a two-lane roadway (one lane in each direction) that would provide direct access to the UOP Student Housing Project site. Brookside Road is designated a collector roadway (City of Stockton 2007a) and has a generally east-west alignment. The roadway has a signalized intersection with Pershing Avenue and an unsignalized intersection with Pacific Avenue. Brookside Road extends west of Pershing Avenue along the north side of the Calaveras River. Brookside Road has a western terminus at March Lane west of Interstate 5 (I-5) approximately two miles west of the project site, and an eastern terminus at Pacific Avenue approximately one-half mile east of the project site. The posted speed limit is 35 miles per hour (mph) in the vicinity of the project site.

**Pershing Avenue** is a north-south roadway with a four-lane width in the vicinity of the project site. Pershing Avenue is designated an arterial roadway (City of Stockton 2007a). The roadway has a northern terminus at Thornton Road north of Hammer Lane, approximately three miles north of the project site. Pershing Avenue has a southern terminus at I-5, approximately two miles south of the project site. The roadway has a bridge crossing the Calaveras River and provides the project site with vehicle access to the majority of the UOP campus south of the river. The posted speed limit is 35 mph in the vicinity of the project site.

**Pacific Avenue** is a north-south roadway with a four-lane width in the vicinity of the project site. Pacific Avenue is designated an arterial roadway (City of Stockton 2007a). The roadway has a northern terminus at Lower Sacramento Road, approximately 2.7 miles north of the project site. Pacific Avenue has a southern terminus at Harding Way, approximately 1.4 miles south of the project site. The roadway has a bridge crossing the Calaveras River and provides the project site



with vehicle access to the majority of the UOP campus south of the river. The posted speed limit is 30 mph in the vicinity of the project site.

**Alpine Avenue** is a discontinuous east-west roadway. West of Pershing Avenue, Alpine Avenue terminates at Ranier Avenue, approximately 2.3 miles west of the project site. This portion of Alpine Avenue has an interchange with I-5, and provides the UOP campus with access to I-5. This portion is four lanes wide, has a 35 mph speed limit, and is designated a collector roadway (City of Stockton 2007a). South of the UOP campus, a separate portion of Alpine Avenue has a western terminus at Kensington Way. This separate portion has an eastern terminus just east of Wilson Way approximately 2.6 miles east of the project site. West of Pacific Avenue, this portion of Alpine Avenue is two lanes wide and has a 35 mph speed limit. East of Pacific Avenue, this portion of Alpine Avenue is four lanes wide and has a 35 mph speed limit. This portion of Alpine Avenue is designated an arterial roadway (City of Stockton 2007a).

**Mendocino Avenue** is a discontinuous east-west roadway. A portion of Mendocino Avenue is along the southern boundary of the UOP campus between Pershing Avenue and Kensington Way, and provides direct access to the campus. This portion of Mendocino Avenue is designated an arterial roadway (City of Stockton 2007a), is four lanes wide, and has a 35 mph speed limit.

**Larry Heller Drive** is a southwest-northeast roadway that provides direct access from the intersection of Pershing Avenue and Alpine Avenue to the center of the UOP campus. The southwest portion of this roadway, which connects with the intersection of Pershing Avenue and Alpine Avenue, is four lanes wide, functions as a collector roadway, and has a posted speed limit of 15 mph. The northeast portion of this roadway, which connects with the center of campus, is two lanes wide and functions as a local roadway.

**March Lane** is a major east-west arterial in the vicinity of the project site. It has a western terminus west of I-5, and an eastern terminus at Holman Road. March Lane has access to I-5 via an interchange. March Lane is planned to be extended east beyond SR 99 with access to SR 99 at an interchange. West of West Lane, March Lane is six lanes wide. From West Lane to Holman Road, March Lane is eight lanes wide. The speed limit on this portion of March Lane is 40 mph.

**Interstate 5** is a major north-south freeway that traverses the western U.S., originating in southern California and continuing north towards Sacramento, Oregon, Washington, and Canada. It is aligned through the western portion of the City of Stockton, and includes interchanges with March Lane and Alpine Avenue. I-5 generally providing four travel lanes in each direction in the vicinity of the March Lane and Alpine Avenue interchanges. A major construction project is ongoing along this portion of I-5, with lane shifts, narrowed lanes, and temporary ramp connections. Prior to the construction project, the speed limit on I-5 was 70 mph. During the construction project, the speed limit is 55 mph.

**State Route 99** traverses the Central Valley, connecting Sacramento and points north with numerous Central Valley cities, including Modesto, Merced, Fresno and Bakersfield. Three travel lanes are provided in each direction in the vicinity of the project site, with auxiliary lanes

present at some locations. Twelve interchanges are provided along the 12-mile length of State Route (SR) 99 within and adjacent to the City limits. The speed limit on SR 99 is 65 mph in the vicinity of the project site.

## **PUBLIC TRANSPORTATION**

The San Joaquin Regional Transit District (SJRTD) is the primary provider of public transportation service in San Joaquin County, providing service to the Stockton metropolitan area, as well as inter-city, inter-regional, and rural transit service. SJRTD provides fixed-route, flexible fixed-route, and dial-a-ride services in Stockton. Each service is described in more detail below. (San Joaquin Regional Transit District 2015)

- Stockton Metropolitan Area Fixed Route Service operates 40 fixed routes within the Stockton metropolitan area, and seven Saturday and Sunday routes.
- Intercity Fixed Route Service is provided by a route between Stockton and the Lodi Station in downtown Lodi connecting with Lodi Grapeline, Calaveras Transit, Delta Breeze, Sacramento South County Transit (SCT)/LINK buses.
- Interregional Commuter Service is a subscription commuter bus service. A total of eight routes connect San Joaquin County to Sacramento, the San Francisco Bay Area, and the Bay Area Rapid Transit (BART) system.
- SJRTD operates two Dial-a-Ride services. General Public Dial-A-Ride is a curb-to-curb service in areas not currently being served by SJRTD or other local transportation providers. Passengers are required to use other public transportation options currently available in their area. Stockton Metro Area Dial-A-Ride (SMA-ADA) is a curb-to-curb service operating within Stockton Metropolitan Area for passengers with an Americans with Disabilities Act (ADA) Certification.
- Hopper Service is a deviated fixed-route service connecting Stockton, Tracy, Lodi, Manteca, Ripon, and Lathrop. The Metro Hopper provides eight routes. The County Hopper provides four routes.

SJRTD service in the vicinity of the project site, shown in **Figure 6**, is provided by the following (San Joaquin Regional Transit District 2015):

- Metro Hopper Service route 4, Central Stockton, travels on Pacific Avenue and has a transfer point on the UOP campus. This route provides service between the Downtown Transit Center and the Weberstown shopping mall at Pacific Avenue and March Lane. This route provides weekday hourly service in each direction between approximately 7:30 a.m. and 4:30 p.m.



- Intercity Fixed Route Service route 23, Lodi-Stockton, travels on Pacific Avenue and has a transfer point at the Sherwood shopping mall at Pacific Avenue and Yokuts Avenue. This route provides service between the Downtown Transit Center and the City of Lodi. This route provides weekday hourly or bi-hourly service in each direction between approximately 6:00 a.m. and 6:00 p.m.
  
- Stockton Metropolitan Area Fixed Route Service route 40, Metro Express, travels on Pacific Avenue and has a transfer point on the UOP campus. This route provides service between the Downtown Transit Center and the intersection of Hammer Lane and Lower Sacramento Road. This route provides service seven days a week. On weekdays, 10 minute headways (frequency of service) is provided in each direction between approximately 5:30 a.m. and 10:00 p.m. On weekends, 20 minute headways is provided in each direction between approximately 8:00 a.m. and 6:30 p.m.
  
- Stockton Metropolitan Area Fixed Route Service route 61, Fontana - Alpine - Malls - Pershing - Country Club – DTC / Quail Lakes - Pershing - Country Club - Section/Oro, travels on Pershing Avenue and has a transfer point at the intersection of Pershing Avenue and Brookside Road. This route provides service between the Downtown Transit Center and the Sherwood shopping mall at Pacific Avenue and Yokuts Avenue. This route provides weekday hourly service in each direction between approximately 5:45 a.m. and 8:30 p.m.
  
- Stockton Metropolitan Area Fixed Route Service route 80, DTC - Pershing - Malls – Oro / Oro - Malls - Pershing - DTC, travels on Pershing Avenue and has a transfer point at the intersection of Pershing Avenue and Brookside Road. This route provides service between the Weberstown shopping mall at Pacific Avenue and March Lane, the Downtown Transit Center and the area northeast of SR 99 and Farmington Road. This route provides weekday hourly and semi-hourly service in each direction between approximately 6:00 a.m. and 9:00 p.m.

**Figure 7** show the future transit system presented in the City's General Plan (City of Stockton 2007b).



## EXISTING TRANSIT SYSTEM

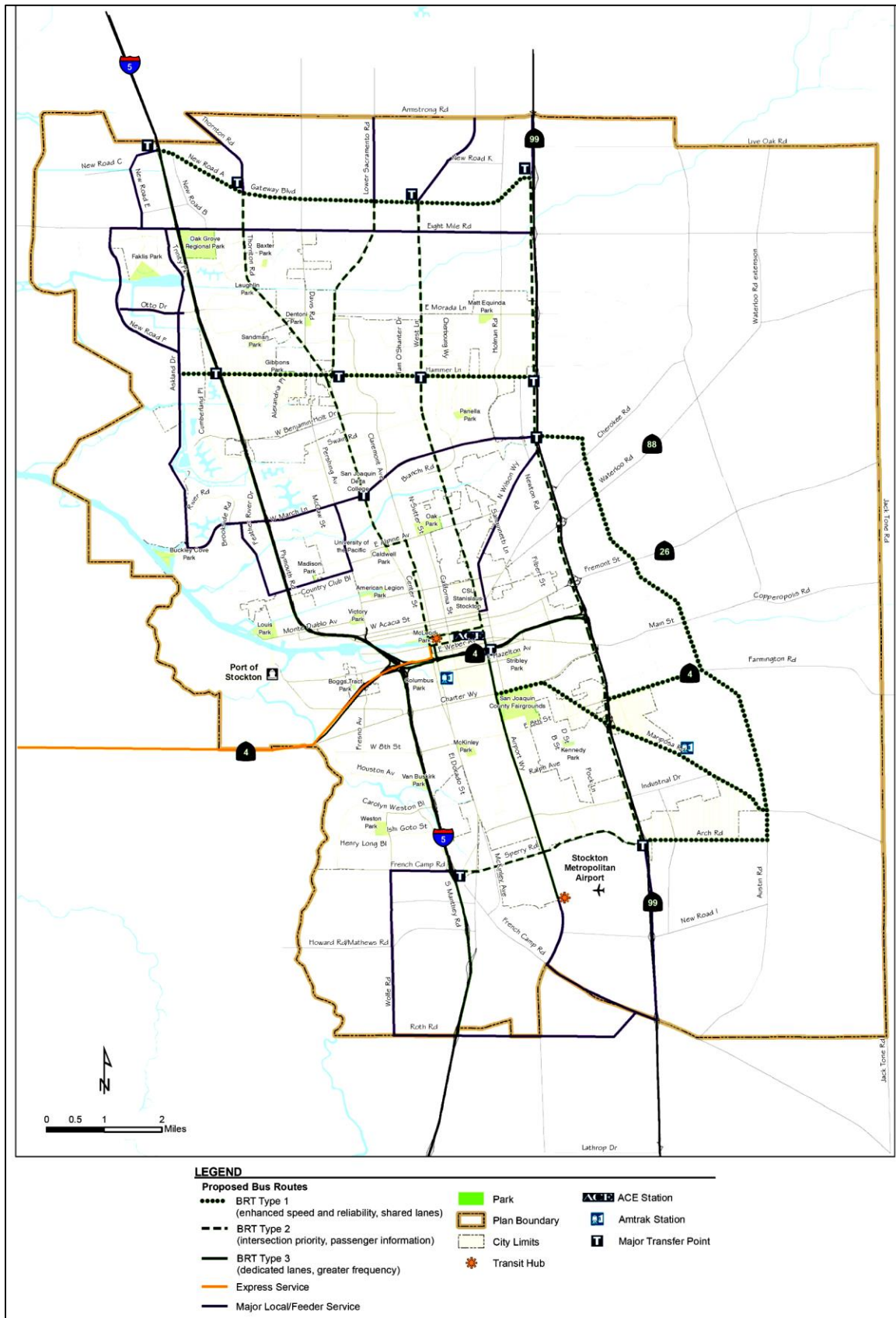
KD Anderson & Associates, Inc.  
Transportation Engineers

Source: San Joaquin Regional Transit District 2015

0780-03 LT 9/24/2015

UOP Student Housing Project Traffic Impact Study

figure 6



2035 STOCKTON GENERAL PLAN  
FUTURE TRANSIT NETWORK  
Source: City of Stockton 2007a

KD Anderson & Associates, Inc.  
Transportation Engineers

0780-03 LT 9/24/2015

UOP Student Housing Project Traffic Impact Study

figure 7



## **CARPOOLING AND VANPOOLING**

Commute Connection is a Regional Rideshare Agency and a program of the San Joaquin Council of Governments (SJCOG). Commute Connection is an employer-based Travel Demand Management (TDM) program serving the three northern regions of the San Joaquin Valley; San Joaquin County since 1978, Stanislaus County since 1987, and Merced County since 2010. The program is designed to help commuters make the transition from driving alone to a ridesharing option such as carpooling, vanpooling, bicycling/walking or riding transit. The program includes free services such as commuter ridematching, Guaranteed Ride Home, and Employer Services. (Commute Connection 2015)

## **PARK AND RIDE FACILITIES**

Park and Ride lots are free parking facilities for commuters to use as a meeting place for carpools, transit, and vanpools. Park and Ride lots in the Stockton area are listed below (Commute Connection 2015).

- The **Calvary First Church on Kelley Drive north of Hammer Lane** lot provides a transit connection to the SJRTD Inter-Regional Bus. The lot provides 40 parking spaces and a bicycle locker.
- The **Lifesong Church, 3034 Michigan Avenue** lot provides a transit connection to the SJRTD Inter-Regional Bus. The lot provides 45 parking spaces.
- The **I-5 at Benjamin Holt Drive; Marina Shopping Center** lot provides a transit connection to the SJRTD Inter-Regional Bus. The lot provides 45 parking spaces.
- The **Super Walmart Center, Hammer Lane and Sampson Street** lot provides 50 parking spaces.
- The **Morada Ranch Shopping Center** lot is at SR 99 and Morada Lane. The lot provides 35 parking spaces.

## **BICYCLE AND PEDESTRIAN SYSTEMS**

The generally level terrain and mild weather make bicycling and walking viable forms of transportation in Stockton. The City of Stockton has an extensive network of bicycle facilities, including off-street trails and paths, as well as on-street bicycle lanes and routes. Many of these facilities also support pedestrian travel. According to Caltrans guidelines, bicycle facilities are generally divided into three categories:

- **Class I Bikeway (Bike Path).** A completely separate facility designated for the exclusive use of bicycles and pedestrians with vehicle and pedestrian cross-flow minimized.
- **Class II Bikeway (Bike Lane).** A striped lane designated for the use of bicycles on a street or highway. Vehicle parking and vehicle/pedestrian cross-flow are permitted at designated locations.
- **Class III Bikeway (Bike Route).** A route designated by signs or pavement markings for bicyclists within the vehicular travel lane (i.e., shared use) of a roadway.

Existing and planned future bicycle facilities in the Stockton area are shown on **Figure 8**. In the vicinity of the project site, existing Class I bicycle facilities are shown along:

- the Calaveras River, and
- March Lane.

Existing Class III bicycle facilities are shown on:

- Pershing Avenue north of Alpine Avenue,
- Alpine Avenue west of Pershing Avenue, and
- Kensington Way from the UOP campus to south of Harding Way.

In the vicinity of the project site, a future Class II bicycle facility is shown on Mendocino Avenue between Pershing Avenue and Kensington Way.

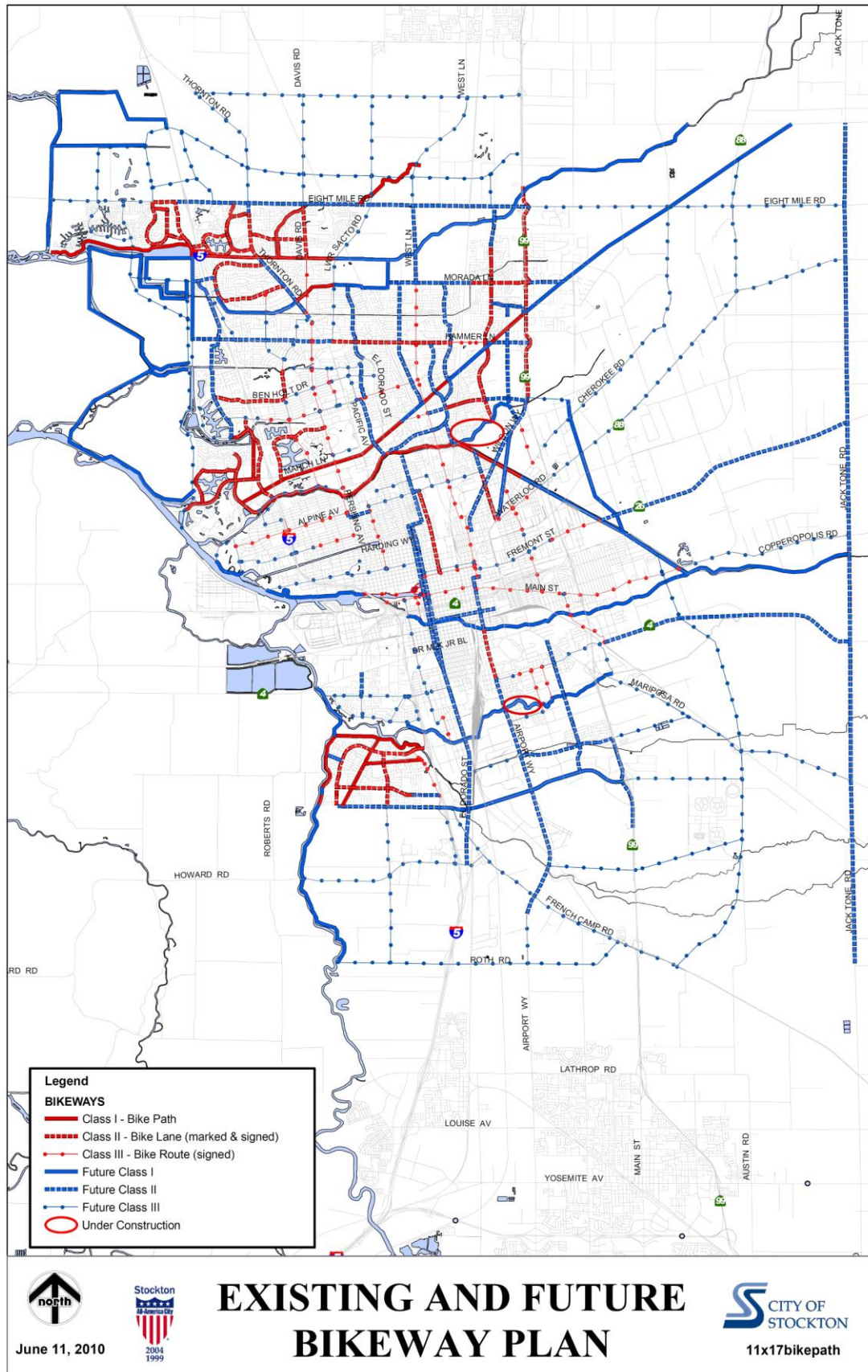
Future Class III bicycle facilities are shown on:

- Fulton Street west of Pacific Avenue and the UOP campus, and
- Alpine Avenue west of Kensington Way.

An existing dedicated bicycle and pedestrian bridge over the Calaveras River connects the east side of the project site to the portion of the UOP campus south of the river. This would be an important access route for residents of the UOP Student Housing project traveling to the UOP campus south of the river.

Sidewalks are currently present on both sides of the following roadways in the vicinity of the project site:

- Brookside Road from west of Pershing Avenue to Pacific Avenue,
- Pershing Avenue from north of Rose Marie Lane to south of Mendocino Avenue,
- Pacific Avenue from north of Brookside Road to south of Alpine Avenue, and
- Alpine Avenue / Larry Heller Drive west of and east of Pershing Avenue.





## **STUDY AREA INTERSECTIONS**

The traffic-related effects of the proposed project were assessed for this traffic impact study by analyzing traffic operations at intersections that would serve project-related travel. Intersections were selected for analysis in consultation with City of Stockton staff (McDowell pers. comm.).

The following intersections were analyzed under near-term existing and EPAP conditions, and under long-term cumulative conditions:

1. Pershing Avenue & Rose Marie Lane
2. Brookside Road & Pershing Avenue
3. Brookside Road & University Townhouse Apartments Driveway
4. Brookside Road & Manchester Avenue
5. Brookside Road & Pacific Avenue
6. Pershing Avenue & Alpine Avenue / Larry Heller Drive
7. Pershing Avenue & Mendocino Avenue

The locations of study intersections are presented in **Figure 9**. The numbers listed above correspond to the intersection numbers on this figure.

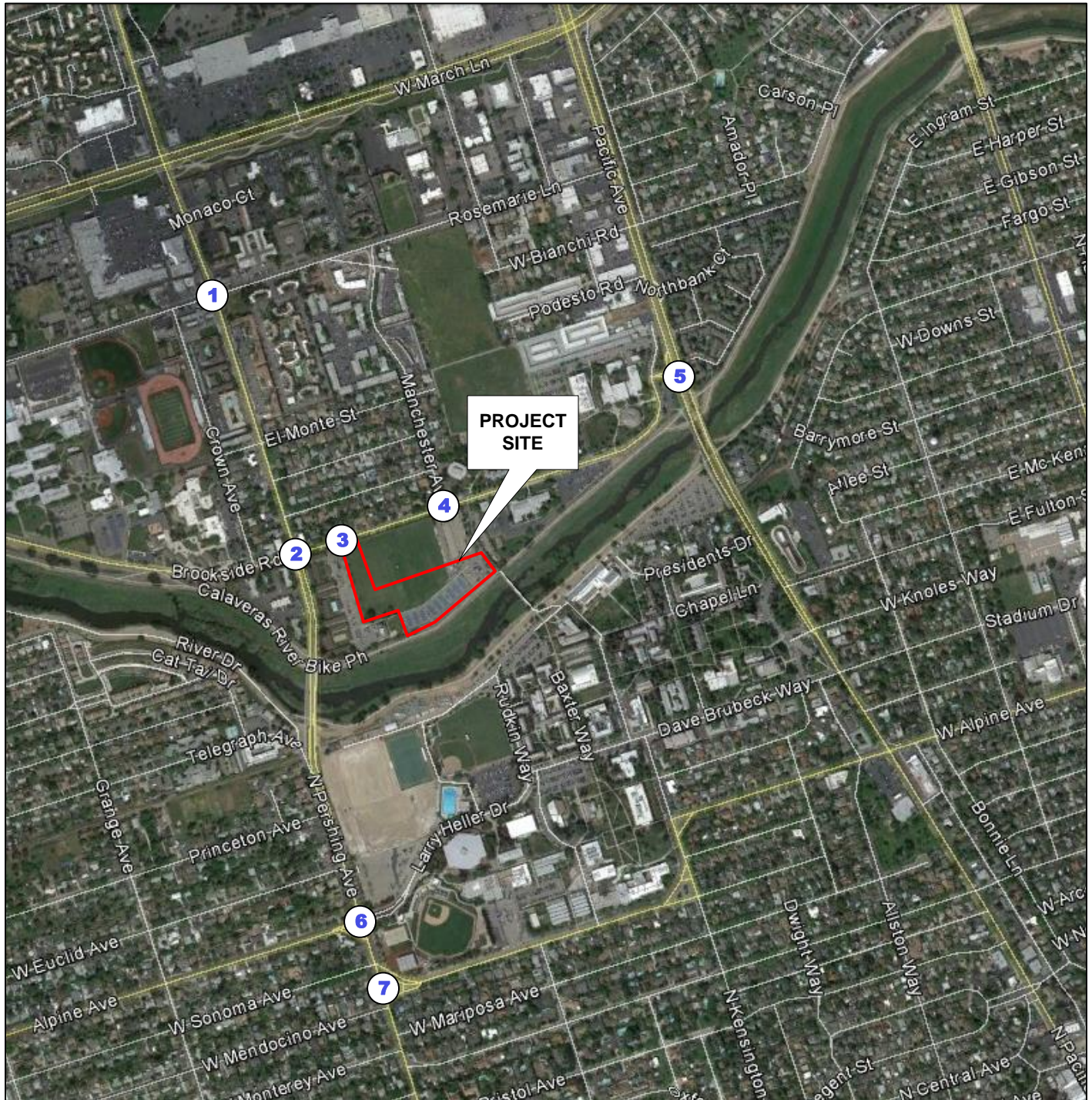
## **STUDY AREA ROADWAY SEGMENTS**

In addition to analyzing intersections, the traffic-related effects of the proposed project on roadway segments were assessed for this traffic impact study. Major roadways adjacent to the project site, and roadways that would serve as major access routes, were analyzed. Roadway segments were selected for analysis in consultation with City of Stockton staff.

The following roadway segments were analyzed under all study scenarios:

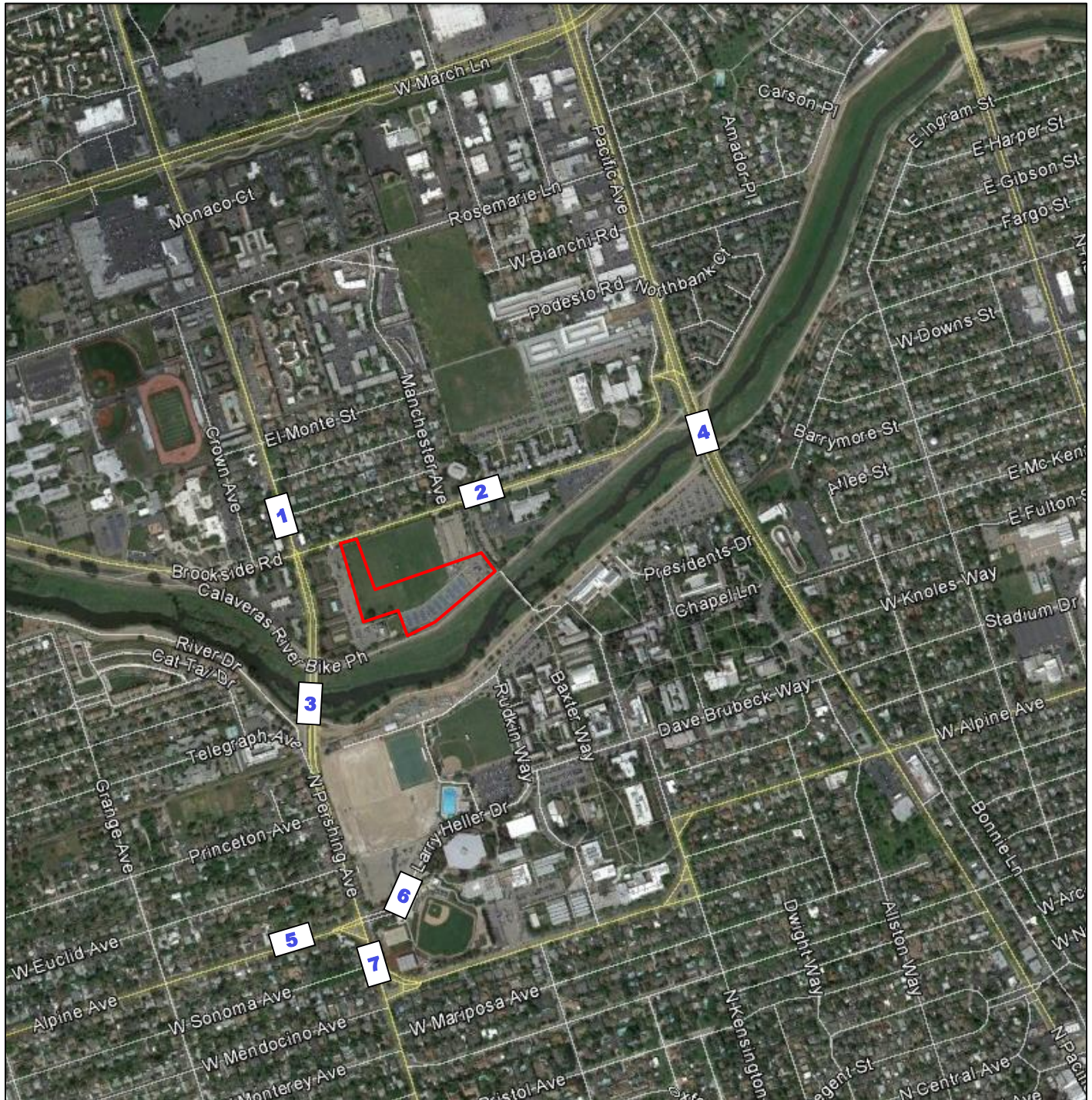
1. Pershing Avenue north of Brookside Road
2. Brookside Road from Pershing Avenue to Pacific Avenue
3. Pershing Avenue over the Calaveras River
4. Pacific Avenue south of Brookside Road
5. Alpine Avenue west of Pershing Avenue
6. Larry Heller Drive east of Pershing Avenue
7. Pershing Avenue south of Alpine Avenue / Larry Heller Drive

The locations of study roadway segments are presented in **Figure 10**. The numbers listed above correspond to the roadway segment numbers on this figure.



## STUDY INTERSECTIONS





## STUDY ROADWAY SEGMENTS

## **ACCIDENTS**

The *City of Stockton General Plan 2035 Background Report* (City of Stockton 2007a) presents information on the number and location of traffic accidents, bicycle accidents, and pedestrian accidents. The following is a summary of information presented in the *Background Report* related to the study locations listed above.

### **Traffic Accidents**

The *City of Stockton General Plan 2035 Background Report* (City of Stockton 2007a) presents a list of 21 locations in the City with the highest number of reported traffic accidents during the three-year period of January 1999 through December 2001. Among these 21 locations, the location with the highest number of reported accidents had 70 accidents. The location with the lowest number of accidents had 39 accidents. None of the 21 locations are facilities analyzed for this traffic impact study.

### **Bicycle Accidents**

The *City of Stockton General Plan 2035 Background Report* (City of Stockton 2007a) presents a list of 20 locations in the City with the highest number of reported bicycle accidents during the three-year period of January 1999 through December 2001. Among these 20 locations, the location with the highest number of reported accidents had five accidents. The location with the lowest number of accidents had three accidents. The intersection of Pershing Avenue and Rose Marie Lane is reported to have had four accidents. The intersection of Pacific Avenue and Brookside Road is reported to have had three accidents.

### **Pedestrian Accidents**

The *City of Stockton General Plan 2035 Background Report* (City of Stockton 2007a) presents a list of 21 locations in the City where either a pedestrian accident death or three or more injuries were reported during the three-year period of January 1999 through December 2001. Among these 21 locations, the location with the highest number of reported accidents had 5 accidents. The location with the lowest number of accidents had 1 accident. Of the 21 locations, none are facilities analyzed for this traffic impact study:

## **METHODOLOGY**

The following is a description of the methods used in the analysis presented in this traffic impact study.

### **Intersection Level of Service Analysis Procedures**

Level of service (LOS) analysis provides a basis for describing existing traffic conditions and for evaluating the significance of project-related traffic impacts. Level of service measures the



quality of traffic flow and is represented by letter designations from A to F, with a grade of A referring to the best conditions, and F representing the worst conditions. The characteristics associated with the various LOS for intersections are presented in **Table 1**.

As specified in the *City of Stockton Transportation Impact Analysis Guidelines* (City of Stockton 2003), and direction provided by City staff (McDowell pers. comm.), LOS was calculated for this traffic impact study using the methodology contained in the *Highway Capacity Manual 2000* (Transportation Research Board 2000). As specified in the City of Stockton guidelines, the LOS for intersections is based on the average length of delays for all motorists at both signalized and unsignalized intersections.

The lengths of vehicle queues were also analyzed for this traffic impact study. Methods presented in the *Highway Capacity Manual 2000* were used to analyze queuing. As specified in the *City of Stockton Transportation Impact Analysis Guidelines*, “design queues” were estimated for signalized intersections. The calculation of vehicle queues are shown in the LOS calculation worksheets presented in the technical appendix. The results are summarized at the end of each set of LOS calculation worksheets.

The *City of Stockton Transportation Impact Analysis Guidelines* (City of Stockton 2003) specifies use of the *Traffix* software package for analysis of intersection LOS. This software package was used for the intersection LOS analysis conducted for this traffic impact study.

### **Signal Warrants Procedures**

Traffic signal warrants are a series of standards which provide guidelines for determining if a traffic signal is appropriate. Signal warrant analyses are typically conducted at intersections of uncontrolled major streets and stop sign-controlled minor streets. If one or more signal warrants are met, signalization of the intersection may be appropriate. However, a signal should not be installed if none of the warrants are met, because installation of signals would increase delays on the previously-uncontrolled major street, resulting in an undesirable increase in overall vehicle delay at the intersection. Signalization may also increase the occurrence of certain types of accidents. Therefore, if signals are installed where signal warrants are not met, the detriment of increased accidents and overall delay may be greater than the benefit in traffic operating conditions on the single worst movement at the intersection. Signal warrants, then, provide an industry-standard basis for identifying when the adverse effect on the worst movement is substantial enough to warrant signalization.

**Table 1. Intersection Level of Service Definitions**

<b>Level of Service</b>	<b>Signalized Intersection</b>	<b>Unsignalized Intersection</b>
A	Uncongested operations, all queues clear in a single-signal cycle. Delay $\leq 10.0$ sec	Little or no delay. Delay $\leq 10$ sec/vehicle
B	Uncongested operations, all queues clear in a single cycle. Delay $> 10.0$ sec and $\leq 20.0$ sec	Short traffic delays. Delay $> 10$ sec/vehicle and $\leq 15$ sec/vehicle
C	Light congestion, occasional backups on critical approaches. Delay $> 20.0$ sec and $\leq 35.0$ sec	Average traffic delays. Delay $> 15$ sec/vehicle and $\leq 25$ sec/vehicle
D	Significant congestion of critical approaches, but intersection functional. Cars required to wait through more than one cycle during short peaks. No long queues formed. Delay $> 35.0$ sec and $\leq 55.0$ sec	Long traffic delays. Delay $> 25$ sec/vehicle and $\leq 35$ sec/vehicle
E	Severe congestion with some long standing queues on critical approaches. Blockage of intersection may occur if traffic signal does not provide for protected turning movements. Traffic queue may block nearby intersection(s) upstream of critical approach(es). Delay $> 55.0$ sec and $\leq 80.0$ sec	Very long traffic delays, failure, extreme congestion. Delay $> 35$ sec/vehicle and $\leq 50$ sec/vehicle
F	Total breakdown, stop-and-go operation. Delay $> 80.0$ sec	Intersection blocked by external causes. Delay $> 50$ sec/vehicle
Source: Transportation Research Board 2000.		



For the analysis conducted for this traffic impact study, available data at unsignalized intersections are limited to a.m. and p.m. peak hour volumes. Thus, unsignalized intersections were evaluated using the Peak Hour Warrant (Warrant Number 3) from the California Department of Transportation document *California Manual on Uniform Traffic Control Devices 2014 Edition* (MUTCD) (California Department of Transportation 2014). This warrant was applied where the minor street experiences long delays in entering or crossing the major street for at least one hour of the day. The Peak Hour Warrant itself includes several components. Some of the components involve comparison of traffic volumes and vehicle delay to a series of standards. Another component involves comparison of traffic volumes to a nomograph.

Even if the Peak Hour Warrant is met, a more detailed signal warrant study is recommended before a signal is installed. The detailed study should consider volumes during the eight highest hours of the day, volumes during the four highest hours of the day, pedestrian traffic, and accident histories.

Signal warrant analysis worksheets for all stop sign-controlled intersections are presented in the technical appendix.

### **Roadway Segment Level of Service Analysis Procedures**

Roadway segment LOS was analyzed for this traffic impact study based on methods used in the City of Stockton General Plan Update analysis (Henry and Morgan pers. comm.). These methods set maximum daily traffic volume thresholds for each LOS designation. The thresholds are shown in **Table 2**.

As shown in **Table 2**, the roadway segment LOS analysis method sets separate thresholds for:

- different types of facilities (i.e., freeways, arterials, and collectors);
- different number of lanes; and
- different area types (i.e., new versus existing).

As described in Henry and Morgan pers. comm.,

“Thresholds for arterials and collectors were based on Highway Capacity Manual calculations and were developed in conjunction with City staff. The arterial thresholds distinguish between roads in the existing urbanized area and those in new development areas; because arterials in new development areas can be designed to higher standards, with medians, exclusive turn lanes, and controlled access from adjacent uses, the capacities are higher than those in previously-developed areas. Thresholds for freeways were based on Highway Capacity Manual procedures relating levels of service to vehicle density ranges.”

As specified in Henry and Morgan pers. comm., the “Existing” area is generally located between I-5 and SR 99, south of Eight Mile Road. Eight Mile Road itself is considered a “New” arterial due to the lack of existing development in the area.

**Table 2. City of Stockton General Plan Roadway Segment Level of Service Thresholds**

<b>Facility Class</b>	<b>Lanes</b>	<b>Area Type</b>	<b>LOS A</b>	<b>LOS B</b>	<b>LOS C</b>	<b>LOS D</b>	<b>LOS E</b>
Freeway	4	All Areas	27,600	45,200	63,600	77,400	86,400
	6	All Areas	41,400	67,800	95,400	116,100	129,600
	8	All Areas	55,200	90,400	127,200	154,800	172,800
	10	All Areas	69,000	113,000	159,000	193,500	216,000
Arterial	2	Existing	8,400	9,300	11,800	14,700	17,200
	2	New	10,000	11,100	14,000	17,500	20,600
	4	Existing	18,600	20,600	26,000	32,500	38,200
	4	New	23,300	25,800	32,600	40,700	47,900
	6	Existing	28,800	32,000	40,300	50,400	59,300
	6	New	33,300	37,000	46,600	58,300	68,600
	8	Existing	38,100	42,300	53,300	66,600	78,400
	8	New	41,100	45,700	57,600	72,000	84,700
Collector	2	Existing	6,400	7,100	9,000	11,300	13,200
	2	New	6,400	7,100	9,000	11,300	13,200
	4	Existing	17,600	19,600	24,700	30,900	36,300
	4	New	21,100	23,500	29,600	37,000	43,500
<p>Source: Stockton General Plan Draft Environmental Impact Report (City of Stockton 2006).  Note: The Stockton General Plan does not provide thresholds for local roads.</p>							

## **Travel Forecasting**

As part of the General Plan Update process, the City of Stockton developed a series of travel demand forecasting simulation models (City of Stockton 2004a.) Several different travel models were developed to simulate different background conditions. Travel models of the following two conditions were used to develop forecasts of future year traffic volumes for this traffic impact study:

- Existing Plus Approved Projects (EPAP), and
- 2035 Conditions with the Updated General Plan Preferred Alternative.

The travel model for the Updated General Plan Preferred Alternative was updated for analysis of the most recent Stockton Public Facility Fee (PFF) Projects program. This updated travel model is the version used in this traffic impact study to forecast Cumulative conditions traffic volumes.

The current version of the City's travel model produces forecasts of daily traffic volumes. The forecasts of daily volumes generated by the City's travel model are adequate for use in the analysis of roadway segment LOS, and are used for daily volume forecasts in this traffic impact study. However, the daily volumes generated by the traffic model are not, by themselves, adequate for use in the peak hour LOS analysis of study intersections.

Daily traffic volumes from the travel models were used to generate growth factors. These growth factors were applied to existing peak hour intersection turning movement traffic volumes. The development of future year intersection turning movement traffic volumes requires that the turning movements at each intersection "balance". To achieve the balance, inbound traffic volumes must equal the outbound traffic volumes, and the volumes must be distributed among the various left-turn, through, and right-turn movements at each intersection. The "balancing" of future year intersection turning movement traffic volumes was conducted using methods described in the Transportation Research Board's (TRB's) National Cooperative Highway Research Program (NCHRP) Report 255, *Highway Traffic Data for Urbanized Area Project Planning and Design* (Transportation Research Board 1982). The NCHRP 255 method applies the desired peak hour directional volumes to the intersection turning movement volumes, using an iterative process to balance and adjust the resulting forecasts to match the desired peak hour directional volumes.

## **LEVEL OF SERVICE SIGNIFICANCE THRESHOLD**

In this traffic impact study, the significance of the proposed project's impact on traffic operating conditions is based on a determination of whether resulting LOS is considered acceptable. A project's impact on traffic conditions is considered significant if implementation of the project would result in LOS changing from levels considered acceptable to levels considered unacceptable, or if the project would substantially worsen already unacceptable LOS.

As noted in the *City of Stockton Transportation Impact Analysis Guidelines* (City of Stockton 2003),

“The City of Stockton’s General Plan has a LOS ‘D’ standard for its roadway system. Intersections and roadway segments operating at LOS ‘A’, ‘B’, ‘C’, or ‘D’ conditions are considered acceptable, while those operating at LOS ‘E’ or ‘F’ conditions are considered unacceptable.

“For a City intersection, a transportation impact for a project is considered significant if the addition of project traffic would cause an intersection that would function at LOS ‘D’ or better without the Project to function at LOS ‘E’ or ‘F’.

“For City intersections with a LOS ‘E’ or ‘F’ conditions without the project, a transportation impact for a project is considered significant if the addition of project traffic causes an increase of greater than 5 seconds in the average delay for the intersection.”

Portions of the City’s guidelines do not specifically address significance thresholds for roadway segments. For this traffic impact study, the City’s significance thresholds described above are also applied to roadway segments. As shown in **Table 1** and **Table 2**, LOS at intersections is measured in seconds of delay, while LOS on roadway segments is measured in traffic volume. Therefore, for roadway segments already at LOS E or F, an increase of greater than five seconds of delay cannot be identified. Because roadway segment LOS is measured in traffic volumes, rather than seconds of delay, an increase in traffic volumes is used in this traffic impact study, in lieu of the threshold of five seconds of delay. For this traffic impact study, if a roadway segment operates at LOS E or F without the project, an impact is considered significant if the addition of project traffic causes an increase of greater than five percent in traffic volumes.

The City of Stockton General Plan *Goals & Policies Report – Stockton General Plan 2035* (City of Stockton 2007b) notes,

“To assist in ensuring efficient traffic operating conditions, evaluating the effects of new development, determining mitigation measures and impact fees, and developing capital improvement programs, the City shall require that Level of Service (LOS) D or better be maintained for both daily and peak hour conditions, with the following exceptions:”

This section of the *Goals & Policies Report* lists more than 20 facilities as exceptions to the LOS D policy standard, and lists the applicable standard. Two facilities are in the study area of this traffic impact study:

- “n. Pacific Avenue, Harding Way to Castle Drive and Alpine Avenue to the Calaveras River – LOS F
- “o. Pershing Avenue, I-5 to Brookside Road – LOS F”

Consistent with the *Goals & Policies Report*, an LOS F standard is applied in this traffic impact study to the following study facilities:

- the intersection of Brookside Road & Pershing Avenue,
- the intersection of Pershing Avenue & Alpine Avenue / Larry Heller Drive,
- the intersection of Pershing Avenue & Mendocino Avenue,
- the roadway segment of Pershing Avenue over the Calaveras River,
- the roadway segment of Pacific Avenue south of Brookside Road, and
- the roadway segment of Pershing Avenue south of Alpine Avenue / Larry Heller Drive.

For the facilities listed above, LOS F or better is considered acceptable. Increasing vehicle delay at an intersection by more than five seconds or increasing traffic volumes on a roadway segment by more than five percent is considered a significant impact.

### **EXISTING PARKING CONDITIONS**

The following is a description of:

- the City of Stockton residential parking permit program,
- existing parking conditions in the area adjacent to the project site, and
- existing parking condition on the UOP campus in general.

#### **City of Stockton Residential Parking Permit Program**

In 2004, the Stockton City Council approved an ordinance enacting a residential parking permit program. The program limits long-term parking of vehicles on streets of certain areas and neighborhoods by nonresidents.

“Residential Parking Permits are enacted in areas in response to the adverse impact and effects caused to certain areas and neighborhood by non-resident (commuter) traffic not visiting or conducting business with residents in that area. . . The operational objective in a residential parking program is to prevent long term non-resident parking on the street of a residential area by means of parking regulations from which residents’ vehicles are exempt. Residential permit parking has been codified in the California Vehicle Code allowing local agencies to legislate programs.” (City of Stockton 2004b)

The residential parking permit program is described in more detail in the Stockton Municipal Code chapter 10.40, *Residential Parking Permits*.

Also in 2004, the Stockton City Council established a residential parking permit program in the Caldwell Village area, south of the UOP campus. The northern border of the Caldwell Village residential parking permit program area is Mendocino Avenue and Dave Brubeck Way. The

western border is Pershing Avenue. The eastern border is Pacific Avenue. The southern portion of the program area includes the residences on the southern side of Monterey Avenue. Some parcels along the southern side of Dave Brubeck Way and the western side of Pacific Avenue are not included in the program area. (City of Stockton 2004c)

In the Caldwell Village residential parking permit program, curbside parking is restricted to two hours, from 7:00 a.m. to 6:00 p.m., on UOP school days. Eligible residents are exempt from the two hour parking restriction, if they display the Caldwell Village parking permit on their vehicle. Each residential parcel in the permit parking area has been allotted a maximum of three parking passes. These parking passes are issued to the property owner at no charge. Enforcement of this parking district is provided by both the Stockton Police Department and the University of the Pacific Department of Public Safety. (City of Stockton 2015)

### **Parking Adjacent to Project Site**

The following is a description of parking conditions in the area adjacent to the project site. The location of on-campus parking lots is shown in **Figure 4**.

**Parking Supply.** In the area adjacent to the project site, off-street on-campus parking is provided in the following lots:

- lot 14 primarily serves the University Townhouse Apartment complex,
- lot 29 primarily serves the Theta Chi fraternity house,
- lot 13 serves UOP faculty and staff and requires a UOP “B” permit, and
- lot 18 primarily serves the physical plant facilities.

Lots 14 and 29 provide 153 non-handicapped restricted spaces and six handicapped restricted spaces. Lot 13 provides 47 non-handicapped restricted spaces. Lot 18 provides 39 non-handicapped restricted spaces and two handicapped restricted spaces.

The Church of Jesus Christ of Latter-day Saints (LDS) is located east of and adjacent to lot 18. The church is not a part of UOP. However, under an informal arrangement, the church allows UOP-related vehicles to park in the church parking lot on weekdays (Panos pers. comm.). The LDS church parking lot provides 275 non-handicapped restricted spaces and seven handicapped restricted spaces.

North of Brookside Road and west of Manchester Avenue are single family dwelling units. The dwelling units face the north side of Brookside Road, and both sides of Churchill Street and Downs Street, and on-street parking is allowed on these sides of Brookside Road, Churchill Street and Downs Street. In addition, on-street parking is allowed on both side of Manchester Avenue. On-street parking is not allowed on the south side of Brookside Road.

**Parking Use.** The use and utilization rate of parking adjacent to the project site varies substantially over the course of a day.



Lots 14 and 29 primarily serve student residential uses. As a result, peak utilization of these lots occurs late at night when the residents have returned from daytime activities and parked overnight. During a daytime observation conducted at 3:30 p.m. on Thursday September 3, 2015, these lots appeared to be approximately 30 percent full. During a nighttime parking utilization count conducted at 10:00 p.m. on Tuesday September 1, 2015, 65 of the 153 non-handicapped restricted spaces were occupied; this is a 42 percent occupancy rate (  $65 / 153 = 0.42$  ). This occupancy rate is generally consistent with a parking utilization count conducted at these lots in 2012, which found a 37 percent occupancy rate.

Lots 13 and 18 serves UOP faculty and staff and requires a UOP “B” permit. These users generate peak parking demand during the daytime, with very little nighttime use. At lot 13:

- no vehicles, zero percent, were observed at 10:00 p.m. on Tuesday September 1, 2015;
- 43 vehicles, 91 percent (  $43 / 47 = 0.91$  ), were observed at 10:00 a.m. on Wednesday September 2, 2015; and
- 36 vehicles, 77 percent (  $36 / 47 = 0.77$  ), were observed at 2:30 p.m. on Wednesday September 2, 2015.

A similar time pattern was observed at lot 18:

- seven vehicles, 18 percent, were observed at 10:00 p.m. on Tuesday September 1, 2015;
- 37 vehicles, 95 percent (  $37 / 39 = 0.95$  ), were observed at 10:00 a.m. on Wednesday September 2, 2015; and
- 28 vehicles, 72 percent (  $28 / 39 = 0.72$  ), were observed at 2:30 p.m. on Wednesday September 2, 2015.

On weekdays, the LDS parking lot primarily serves employees of the physical plant facilities, and the UOP health sciences facilities north of Brookside Road. On Thursday September 3, 2015, a substantial number of people were observed departing from the physical plant facilities and the health sciences facilities at approximately 4:00 p.m. On this day, the LDS parking lot was observed to be approximately 75 percent full at 3:45 p.m. and approximately 50 percent full at 4:05 p.m. The LDS parking lot was observed to have little overnight use.

On-street parking along Brookside Road, Churchill Street, Downs Street, and Manchester Avenue was observed:

- during the daytime in the late afternoon on Thursday August 13, 2015, while UOP was not in regular session,

- at nighttime on Tuesday September 1, 2015, when UOP was in regular session, between 9:00 p.m. and 10:00 p.m., and
- during the daytime on Thursday September 3, 2015, when UOP was in regular session, between 3:30 p.m. and 5:40 p.m.

During the daytime on Thursday August 13, 2015, while UOP was not in regular session, and at nighttime on Tuesday September 1, 2015, when UOP was in regular session, on-street parking along Brookside Road, Churchill Street, Downs Street and Manchester Avenue was observed to be approximately 10 percent to 20 percent full. The 10 percent to 20 percent occupancy rate appears to be a baseline level, related primarily to adjacent single-family residential uses. At nighttime, on-street parking does not appear to be used by vehicles related to UOP. Because student parking tends to peak at nighttime, the low occupancy level indicates little, if any, overnight on-street parking by students.

In contrast, during the daytime at 3:30 p.m. on Thursday August 13, 2015, on-street parking on Manchester Avenue between Brookside Road and Downs Street was observed to be approximately 80 percent to 90 percent full. At the same time, on-street parking along the eastern one-third of Churchill Street was also observed to be approximately 80 percent to 90 percent full. These vehicles parked on-street were observed to be primarily associated with the physical plant facilities, the UOP Department of Public Safety, and the Cowell Wellness Center. By 4:15 p.m. on Thursday August 13, 2015, on-street parking on Manchester Avenue was observed to be approximately 50 percent full, and on-street parking along the eastern one-third of Churchill Street was also observed to be unused.

The UOP Department of Public Safety has received verbal complaints from residents of Brookside Road, Churchill Street, Downs Street regarding UOP-related vehicles occupying on-street parking during the daytime. Complaints have included UOP-related vehicles occupying on-street parking, thus preventing visitors from parking in front of residences they are visiting. (Panos pers. comm.)

**Recommended Improvement – Establish Residential Parking Permit Program in the Area North of Brookside Road.** To reduce the number of UOP-related vehicles parking in the residential area north of Brookside Road, a residential parking permit program should be established in the area north of Brookside Road. The geographic area of the program may include all or portions of: Brookside Road, Manchester Avenue, Churchill Street and Downs Street. Per Stockton Municipal Code chapter 10.40, *Residential Parking Permits*, the geographic area of the program would be established in consultation with residents in the area north of Brookside Road, and the City of Stockton.

### **Campus-Wide Parking**

The location of on-campus parking lots is shown in **Figure 4**. In addition to parking facilities adjacent to the project site (described immediately above), other off-street parking lots on the UOP campus are heavily utilized. No quantitative utilization data are presented in this traffic

impact study for these other parking facilities. However, information from the UOP Department of Public Safety (Panos pers comm.) indicates all except one of the other parking lots are full, or near to full, at some time during the day on a large majority of school days. The one exception is lot 1, located on the northeast corner of Pershing Avenue and Larry Heller Drive.

Lot 1 serves nearby existing athletic facilities and in the future will serve additional athletic facilities adjacent to and north of lot 1. While lot 1 is not full on the large majority of school days, it is heavily-used at nighttime during athletic events. Completion and use of additional athletic facilities north of lot 1 would increase demand for parking at this facility.

## **EXISTING INTERSECTION TRAFFIC VOLUMES AND LEVELS OF SERVICE**

The following is a description of existing traffic operating conditions at the study intersections.

### **Intersection Traffic Volumes**

Intersection turning movement count data at the study intersections were collected for this traffic impact study. Traffic count data collected for this traffic impact study are presented in the technical appendix. The peak period intersection turning movement count data were collected on Tuesday September 1, 2015 during the 7:00 a.m. to 9:00 a.m. period, and the 4:00 p.m. to 6:00 p.m. period. Volumes during the highest one-hour period were used for this traffic impact study.

**Figure 11** presents the existing lane configurations and existing a.m. peak hour and p.m. peak hour traffic volumes at the study intersections.

### **Intersection Levels of Service**

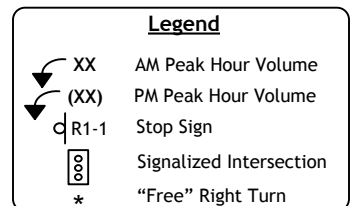
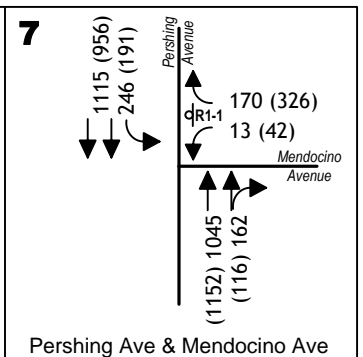
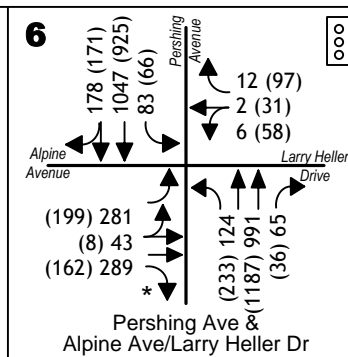
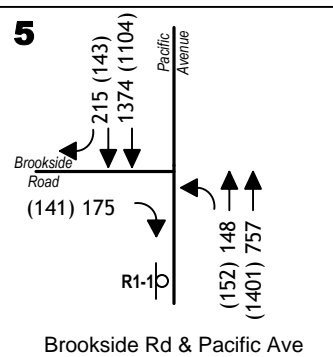
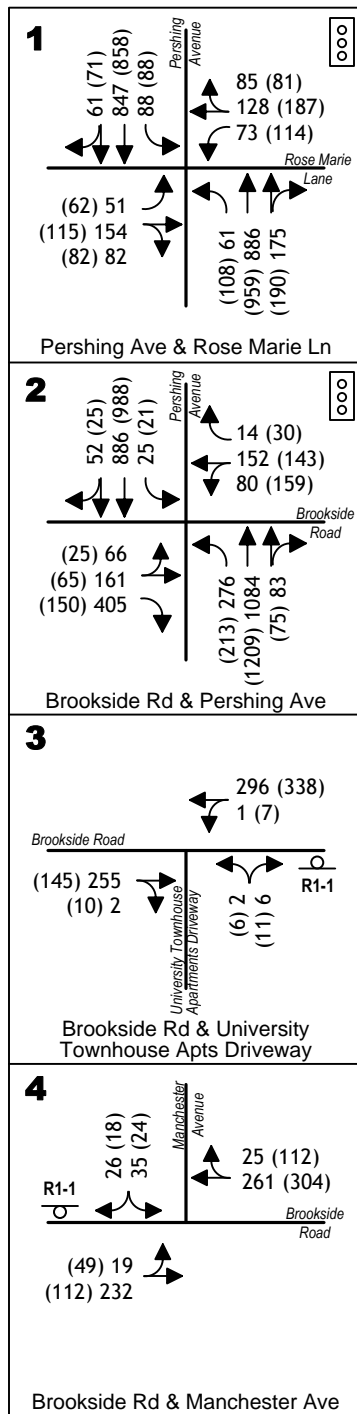
**Table 3** presents a summary of existing a.m. peak hour and p.m. peak hour LOS at the seven study intersections. The worksheets presenting the calculation of LOS are included in the technical appendix.

All seven study intersections operate at acceptable LOS during both the a.m. peak hour and the p.m. peak hour. Six of the seven study intersections operate at LOS D or better.

The intersection of Brookside Road and Pershing Avenue operates at LOS E during both the a.m. peak hour and the p.m. peak hour. However, as described previously in the *Level of Service Significance Threshold* section of this traffic impact study, LOS E is considered by the City of Stockton to be acceptable at this intersection.

No improvements are needed at the study intersections to achieve acceptable LOS.





## EXISTING TRAFFIC VOLUMES AND LANE CONFIGURATIONS

KD Anderson & Associates, Inc.  
Transportation Engineers

0780-03 LT 9/24/2015

UOP Student Housing Project Traffic Impact Study

figure 11

**Table 3. Intersection Level of Service - Existing Conditions**

Study Intersections	Inters. Control	Signal Warrant Met?	AM Peak		PM Peak	
			LOS	Delay	LOS	Delay
1 Pershing Avenue & Rose Marie Lane	Signal		B	17.5	B	19.5
2 Brookside Road & Pershing Avenue	Signal		E	63.0	E	59.8
3 Brookside Road & University Townhouse Apartments Driveway	Unsig	No	A	0.2	A	0.4
4 Brookside Road & Manchester Avenue	Unsig	No	A	1.5	A	1.5
5 Brookside Road & Pacific Avenue	Unsig	Yes	A	3.0	A	1.6
6 Pershing Avenue & Alpine Avenue / Larry Heller Drive	Signal		B	15.0	B	19.5
7 Pershing Avenue & Mendocino Avenue	Unsig	Yes	A	5.1	C	20.0
<p>Notes: LOS = Level of Service. "Inters. Control" = Type of intersection control.            "Signal" = Signalized light control. "Unsig" = Unsignalized stop-sign control.            Delay is measured in seconds per vehicle. Per City of Stockton guidelines, intersection average delay is reported for all intersections, including unsignalized intersections.</p>						

### **Queuing at the Intersection of Brookside Road and Pershing Avenue**

As noted above, the intersection of Brookside Road and Pershing Avenue operates at LOS E during the a.m. peak hour and p.m. peak hour. As described previously in the *Level of Service Significance Threshold* section of this traffic impact study, LOS E is considered by the Stockton to be acceptable at this intersection. While the LOS at this intersection is considered to be acceptable, a long queue of westbound vehicles was observed in the east leg during peak hours. The queue was observed during the p.m. peak hour to extend east from the intersection of Brookside Road and Pershing Avenue to beyond the intersection of Pershing Avenue and Manchester Avenue, a distance of more than 1,000 feet long.

The number of vehicles approaching the intersection of Brookside Road and Pershing Avenue (246 in the a.m. peak hour and 332 in the p.m. peak hour) exceeds the capacity of “green time” provided in the signal timing to the westbound approach. Because the number of approaching vehicles exceeds the green time capacity, the vehicle queue increases incrementally during each signal cycle, resulting in the long vehicle queue.

The intersection of Brookside Road and Pershing Avenue is one of a series of intersections along Pershing Avenue with coordinated signal timing. Pershing Avenue is a relatively high-volume corridor with 963 southbound 1,443 and northbound vehicles in the a.m. peak hour, and 1,034 southbound and 1,497 northbound vehicles in the p.m. peak hour. The coordinated signal timing along this corridor provides improved vehicle flow in the north-south direction.

**Recommended Improvement – Modify Signal Timing or Lane Configuration at the Intersection of Brookside Road and Pershing Avenue.** To reduce the peak hour queue of westbound vehicles approaching the intersection of Brookside Road and Pershing Avenue, the signal timing or the lane configurations should be modified.

Signal Timing. As noted above, the queue of westbound vehicles is due to the capacity of green time provided to westbound vehicles at the intersection of Brookside Road and Pershing Avenue being less than the number of westbound vehicles approaching the intersection in the peak hour.

A preliminary assessment of queuing at the intersection of Brookside Road and Pershing Avenue was conducted for this traffic impact study based on signal timing plans provided by the City of Stockton (Chitsazan pers. comm.), on-site observation and recording of timing of the intersection in operation, and analysis using the Synchro/SimTraffic software package (Trafficware 2015). The preliminary assessment indicates it is likely the westbound vehicle detector system is not functioning. It appears the signal controller system at this intersection is not properly detecting the presence of westbound vehicles queued at the intersection and, as a result, not providing enough green time to the serve the westbound vehicles.

The City of Stockton is currently planning to install an Adaptive Traffic Control System (ATCS) at 16 signalized intersections along the Pershing Avenue corridor, including the intersection of Brookside Road and Pershing Avenue. The ATCS project is fully funded (Chitsazan pers. comm.). The ATCS project would replace and upgrade signal control systems at intersections



along the Pershing Avenue corridor. Implementation of the ATCS project would improve traffic operations at this intersection and, based on the preliminary assessment of queuing, would be expected to increase the capacity of the westbound approach.

Increasing the green time provided to westbound vehicles would increase the capacity of this approach, which would decrease the length of the westbound queue. However, as also noted above, coordinated signal timing is provided along the Pershing Avenue corridor to facilitate the high-volume north-south movement. The need to coordinate signal timing along this corridor may constrain the ability to provide more green time to the westbound approach. Nevertheless, the monitoring and improved responsiveness of the ATCS, and correcting the westbound vehicle detector system would improve the ability to serve the westbound queue.

Lane Configurations. The westbound approach to the intersection of Brookside Road and Pershing Avenue includes a combined through/left-turn lane and an exclusive right-turn lane. The exclusive right-turn lane serves only vehicles making a westbound-to-northbound right turn, which are six percent of vehicles in the a.m. peak hour and nine percent of vehicles in the p.m. peak hour.

The westbound combined through/left-turn lane serves vehicles making both the westbound through movement and the westbound-to-southbound left-turn movement. Westbound through movements are 62 percent of vehicles in the a.m. peak hour and 43 percent of vehicles in the p.m. peak hour. Westbound-to-southbound left-turn movements are 33 percent of vehicles in the a.m. peak hour and 48 percent of vehicles in the p.m. peak hour.

Changing the westbound approach to include an exclusive left-turn lane and a westbound combined through/right-turn lane would distribute vehicles more evenly between the two approach lanes, and allow more efficient use of the constrained westbound green time. This would reduce both vehicle delay and the length of the westbound queue.

To allow an adequate alignment for the westbound through movement from the east leg to the west leg, the centerline of the east leg of the intersection should be shifted to the south. This would result in narrowing of the eastbound departure lane, however it appears adequate width is available to allow narrowing of the eastbound departure lane.

## **EXISTING ROADWAY SEGMENT TRAFFIC VOLUMES AND LEVELS OF SERVICE**

The following is a description of existing traffic operating conditions on study roadway segments.

### **Roadway Segment Traffic Volumes**

Daily traffic volume count data at the study roadway segments were collected for this traffic impact study for a 24-hour period on Tuesday September 1, 2015. Traffic count data collected for this traffic impact study are presented in the technical appendix.

**Table 4** presents the existing daily traffic volumes for study roadway segments.

### **Roadway Segment Levels of Service**

**Table 4** presents a summary of existing LOS on the seven study roadway segments. Five of the roadway segments operate at acceptable LOS D or better.

The study roadway segments Pershing Avenue over the Calaveras River, and Pacific Avenue south of Brookside Road operate at LOS E. However, as described previously in the *Level of Service Significance Threshold* section of this traffic impact study, LOS E is considered by the City of Stockton to be acceptable on these roadway segments.

No improvements are needed on the study roadway segments to achieve acceptable LOS.

**Table 4. Roadway Segment Level of Service -  
Existing Conditions**

Roadway Segment	Number of Lanes	Daily Capacity	Daily Volume	V/C Ratio	Level of Service
1 Pershing Avenue north of Brookside Road	4	38,200	29,135	0.76	D
2 Brookside Road Pershing Avenue to Pacific Avenue	2	13,200	5,362	0.41	A
3 Pershing Avenue over the Calaveras River	4	38,200	33,756	0.88	E
4 Pacific Avenue south of Brookside Road	4	38,200	33,098	0.87	E
5 Alpine Avenue west of Pershing Avenue	4	36,300	9,544	0.26	A
6 Larry Heller Drive east of Pershing Avenue	2	13,200	2,905	0.22	A
7 Pershing Avenue south of Alpine Ave. / Larry Heller Dr.	4	38,200	32,338	0.85	D
Notes: "V/C Ratio" = volume-to-capacity ratio.					

## **EXISTING PLUS APPROVED PROJECTS** **NO UOP STUDENT HOUSING PROJECT CONDITIONS**

EPAP No UOP Student Housing project conditions represent a near-term future background condition. This condition is also referred to in this traffic impact study as EPAP No Project conditions. Development of land uses and roadway improvements associated with previously-approved projects are assumed in this condition. This scenario does not include development of the proposed UOP Student Housing project. The EPAP No Project condition, therefore, serves as the baseline condition used to assess the significance of near-term project-related traffic impacts.

### **TRAFFIC VOLUME FORECASTS**

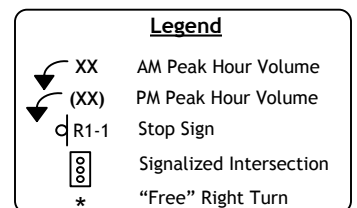
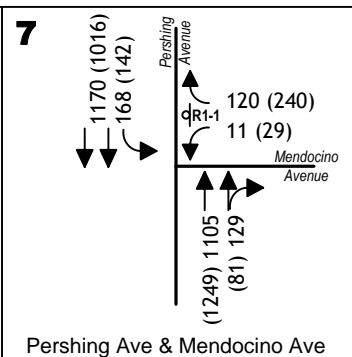
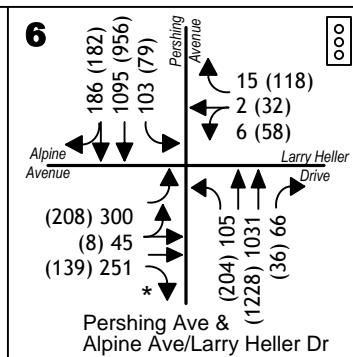
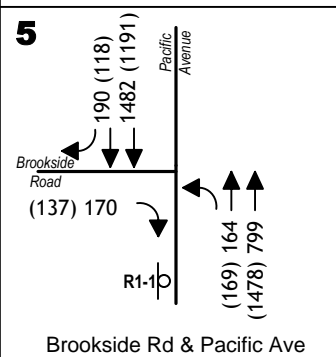
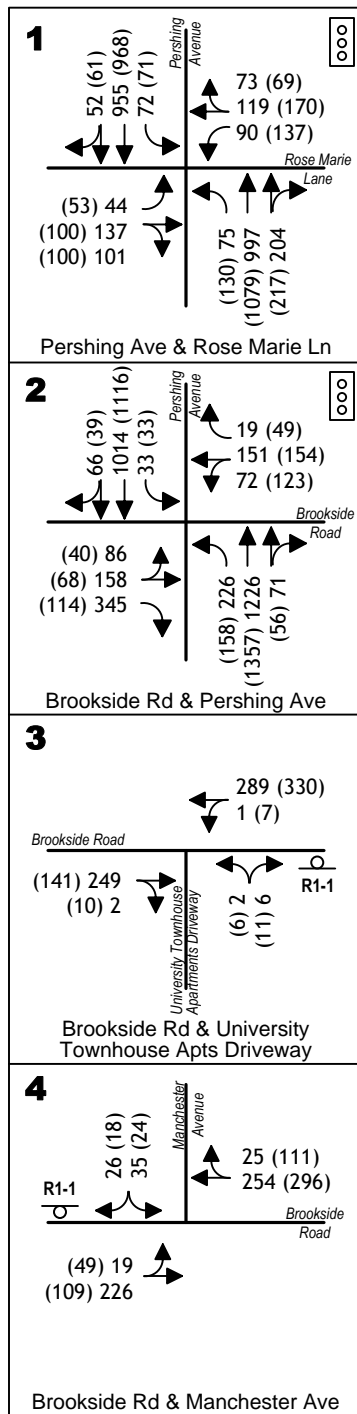
The City of Stockton Travel Demand Model (City of Stockton 2004a) was used to develop forecasts of background increases in traffic volumes under near-term EPAP conditions. The increases in traffic volumes reflect development of near-term previously-approved projects in Stockton. The model was modified in the vicinity of the project site to add detail to the model and more accurately represent how land uses are provided access to the roadway network. Minor changes were also made to land uses in the model to accurately represent land uses.

Application of these methods results in the a.m. peak hour and p.m. peak hour intersection traffic volumes presented in **Figure 12** and the daily traffic volumes presented in **Table 5**.

The UOP Student Housing project site is located in an area that is generally built-out with little vacant land. Future land use development in the area is expected to be limited. As a result, the travel demand model does not forecast large increases in traffic volumes under EPAP conditions. In general, the model forecasts north-south traffic volumes in the area to increase by approximately five percent to 15 percent. In general, the model forecasts east-west traffic volume to decrease by a small amount, approximately one percent to five percent.

### **ROADWAY IMPROVEMENTS**

Because the UOP Student Housing project site is located in an area that is generally built-out, the EPAP No Project condition assumes no roadway improvements associated with previously-approved development projects.



# EXISTING PLUS APPROVED PROJECTS NO UOP STUDENT HOUSING PROJECT CONDITIONS TRAFFIC VOLUMES AND LANE CONFIGURATIONS



**Table 5. Roadway Segment Level of Service -  
EPAP No Project Conditions**

Roadway Segment	Number of Lanes	Daily Capacity	Daily Volume	V/C Ratio	Level of Service
1 Pershing Avenue north of Brookside Road	4	38,200	33,308	0.87	E
2 Brookside Road Pershing Avenue to Pacific Avenue	2	13,200	5,228	0.40	A
3 Pershing Avenue over the Calaveras River	4	38,200	35,231	0.92	E
4 Pacific Avenue south of Brookside Road	4	38,200	35,298	0.92	E
5 Alpine Avenue west of Pershing Avenue	4	36,300	9,182	0.25	A
6 Larry Heller Drive east of Pershing Avenue	2	13,200	3,248	0.25	A
7 Pershing Avenue south of Alpine Ave. / Larry Heller Dr.	4	38,200	33,854	0.89	E
Notes: "V/C Ratio" = volume-to-capacity ratio.					

## **INTERSECTION LEVELS OF SERVICE**

**Table 6** presents the a.m. peak hour and p.m. peak hour LOS at each study intersection under EPAP No Project conditions. The worksheets presenting the calculation of LOS are included in the technical appendix.

As noted earlier, traffic volumes under EPAP No Project conditions would generally be slightly higher than under Existing conditions on north-south roadways and slightly lower on east-west roadways.

Under EPAP No Project conditions, LOS at all seven intersections would be at acceptable LOS D or better during both the a.m. peak hour and the p.m. peak hour. No improvements are needed at the study intersections to achieve acceptable LOS.

## **ROADWAY SEGMENT LEVELS OF SERVICE**

**Table 5** presents a summary of LOS on the seven study roadway segments under EPAP No Project conditions. Three of the roadway segments would operate at acceptable LOS D or better. No improvements are needed on these three roadway segments to achieve acceptable LOS.

The following three study roadway segments would operate at LOS E under EPAP No Project conditions:

- Pershing Avenue over the Calaveras River,
- Pacific Avenue south of Brookside Road, and
- Pershing Avenue south of Alpine Avenue / Larry Heller Drive.

As described previously in the *Level of Service Significance Threshold* section of this traffic impact study, LOS E is considered by the City of Stockton to be acceptable on these three roadway segments. Therefore, no improvements are needed on these study roadway segments to achieve acceptable LOS.

As shown in **Table 5**, the roadway segment Pershing Avenue north of Brookside Road would operate at LOS E under EPAP No Project conditions. LOS E is considered to be unacceptable by the City of Stockton. Widening this roadway segment would improve LOS to acceptable levels. However, there is a lack of available right-of-way for widening, and several existing structures are present adjacent to or near to the existing right-of-way. As a result, widening this roadway segment is not considered feasible and this LOS would remain unacceptable regardless of whether or not the proposed project is constructed.



**Table 6. Intersection Level of Service - EPAP No Project Conditions**

Study Intersections	Inters. Control	Signal Warrant Met?	AM Peak		PM Peak	
			LOS	Delay	LOS	Delay
1 Pershing Avenue & Rose Marie Lane	Signal		B	17.1	B	19.7
2 Brookside Road & Pershing Avenue	Signal		D	46.1	D	49.5
3 Brookside Road & University Townhouse Apartments Driveway	Unsig	No	A	0.2	A	0.5
4 Brookside Road & Manchester Avenue	Unsig	No	A	1.5	A	1.6
5 Brookside Road & Pacific Avenue	Unsig	Yes	A	3.4	A	1.8
6 Pershing Avenue & Alpine Avenue / Larry Heller Drive	Signal		B	15.4	C	20.3
7 Pershing Avenue & Mendocino Avenue	Unsig	Yes	A	2.8	A	9.0
<p>Notes: LOS = Level of Service. "Inters. Control" = Type of intersection control.            "Signal" = Signalized light control. "Unsig" = Unsignalized stop-sign control.            Delay is measured in seconds per vehicle. Per City of Stockton guidelines, intersection average delay is reported for all intersections, including unsignalized intersections.</p>						

## **EXISTING PLUS APPROVED PROJECTS** **PLUS UOP STUDENT HOUSING PROJECT IMPACTS**

The EPAP Plus UOP Student Housing project condition represent a near-term future condition with the proposed project. This condition is also referred to in this traffic impact study as EPAP Plus Project conditions.

The development of the UOP Student Housing project would result in vehicle traffic to and from the project site. The amount of additional traffic on a particular section of the street network depends on three factors:

- Trip Generation, the number of new trips generated by the project,
- Trip Distribution, the direction of travel for the new traffic, and
- Trip Assignment, the specific routes used by the new traffic.

### **TRIP GENERATION**

Trip generation estimates for traffic impact studies are often based on industry-standard reference documents, such as the ITE publication *Trip Generation Manual, 9<sup>th</sup> Edition* (Institute of Transportation Engineers 2012). These industry-standard documents contain information on common land uses such as single-family housing, apartments, offices, and shopping centers. The ITE *Trip Generation Manual, 9<sup>th</sup> Edition* contains trip generation rate information on tennis courts, such as the Hal Nelson tennis courts which would be removed by the UOP Student Housing project. The ITE document, however, does not contain information on less-common land uses such as the proposed student housing.

For this traffic impact study, estimates of the reduction in travel associated with removal of the Hal Nelson tennis courts were based on trip generation rates from the ITE *Trip Generation Manual, 9<sup>th</sup> Edition*. Tennis courts are included in the ITE document as land use code 490.

Trip generation estimates for the student housing portion of the UOP Student Housing project were based on project-specific and site-specific empirical information. The calculation of trip generation rates for the student housing portion of the proposed project is presented in **Table 7**. The following is a description of the calculation.

To establish trip generation directly applicable to student housing at UOP on the north side of the Calaveras River, traffic count data were collected at the driveway that serves the University Townhouse Apartment and Theta Chi fraternity house. The count data were collected on Tuesday November, 29, 2011 and Tuesday September 1, 2015 during the daily, morning peak and evening peak periods. To develop trip generation rates associated with the number of student housing beds, the number of beds occupied at the University Townhouse Apartment and Theta Chi fraternity house on these two dates was also established. Trip generation for student

housing is considered to be strongly associated with the number of occupied beds, resulting in occupied beds being the independent variable for the student housing trip generation rates.

**Table 7** shows the traffic count data and the number of occupied beds. The traffic count data were divided by the number of occupied beds to calculate trip generation rates. As shown in **Table 7**, the day-to-day variation common in trip generation from most land uses was minimized by averaging the student housing trip generation rates calculated for Tuesday November, 29, 2011 and Tuesday September 1, 2015. The site specific trip generation rates for student housing at UOP are estimated to be:

- 2.41 vehicle trips per bed per day,
- 0.11 vehicle trips per bed in the a.m. peak hour (0.06 inbound and 0.05 outbound), and
- 0.22 vehicle trips per bed in the p.m. peak hour (0.12 inbound and 0.10 outbound).

To determine the reasonableness of trip generation rates shown in **Table 7**, the rates were compared to a trip generation study conducted for student housing at the University of Minnesota (Spack Consulting 2012). The comparison of trip generation rates is shown in **Table 8**. While the number of occupied beds was selected as the independent variable in the calculation of trip generation rates specific to UOP student housing, the trip generation rates presented in Spack Consulting 2012 use dwelling units, bedrooms, and parking stalls as the independent variables. As result, the trip generation rates are not directly comparable. The trip generation rates based on traffic count data collected at the driveway that serves the University Townhouse Apartment and Theta Chi fraternity house are all within the range of rates presented in Spack Consulting 2012. Therefore, the rates specific to UOP student housing are considered to be valid and applicable.

The trip generation rates used in this traffic impact study are presented in **Table 9**. The trip generation rates are applied to the amount of project-related land uses. The resulting trip generation estimates are presented in **Table 10**.

As shown in **Table 10**, the UOP Student Housing project would generate an estimated 670 net vehicle trips per day, with 29 trips during the a.m. peak hour and 53 trips during the p.m. peak hour.

**Table 7 - Measured Trip Generation at  
University Townhouse Apartments and Theta Chi Fraternity**

Variable	Occupied Beds	Time Period						
		Daily	AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
Measured November 29, 2011								
Volume at Driveway (Based on Count Data)		446	17	6	23	19	19	38
University Townhouse Apts	171							
Theta Chi Fraternity	23							
	<hr/> 194							
Trip Generation Rate (in Trips per Occupied Bed)		2.30	0.09	0.03	0.12	0.10	0.10	0.20
Measured September 29, 2015								
Volume at Driveway (Based on Count Data)		362	3	10	13	20	14	34
University Townhouse Apts	132							
Theta Chi Fraternity	12							
	<hr/> 144							
Trip Generation Rate (in Trips per Occupied Bed)		2.51	0.02	0.07	0.09	0.14	0.10	0.24
Average of 2011 and 2015 Rates								
Trip Generation Rate (in Trips per Occupied Bed)		2.41	0.06	0.05	0.11	0.12	0.10	0.22

**Table 8. Comparison of Student Housing Trip Generation Rates**

Source	Time Period		
	Daily	AM Peak Hour	PM Peak Hour
Traffic Counts at University Townhouse Apts. and Theta Chi Fraternity Driveway (in Trips per Occupied Bed)	2.41	0.11	0.22
Spack Consulting Technical Memorandum (in Trips per Dwelling Unit)	2.82	0.13	0.24
Spack Consulting Technical Memorandum (in Trips per Bedroom)	1.42	0.07	0.13
Spack Consulting Technical Memorandum (in Trips per Parking Stall)	2.82	0.13	0.27
<hr/> <p>Source: Spack Consulting 2012, and KD Anderson &amp; Associates 2015</p>			

**Table 9. UOP Student Housing Project Trip Generation Rates**

Land Use Category	Independent Variable	Vehicle Trip Rates						
		AM Peak Hour				PM Peak Hour		
		Daily	In	Out	Total	In	Out	Total
UOP Student Housing	Occupied Beds	2.41	0.06	0.05	0.11	0.12	0.10	0.22
Tennis Courts (ITE Land Use Code 490)	Tennis Courts	31.04	0.84	0.84	1.67	1.94	1.94	3.88
<p>Notes: Totals may not equal the sum of the components due to rounding.  Student Housing trip generation rates are based on University Townhouse Apartments traffic count data.  Tennis Court trip generation rates are from Institute of Transportation Engineers 2012.</p>								



**Table 10. UOP Student Housing Project Trip Generation Estimates**

Land Use Category	Amount of Land Use	Vehicle Trips						
		AM Peak Hour				PM Peak Hour		
		Daily	In	Out	Total	In	Out	Total
UOP Student Housing	381 Occupied Beds	918	23	19	42	46	38	84
Tennis Courts (ITE Land Use Code 490)	-8 Tennis Courts	-248	-7	-7	-13	-16	-16	-31
<b>Total</b>		670	16	12	29	30	22	53
Notes: Totals may not equal the sum of the components due to rounding.								

## **TRIP DISTRIBUTION**

Project-related trips were geographically distributed over the study area roadway network. The geographical distribution of trips is based on the relative attractiveness or utility of possible destinations. Trip distribution percentages applied in this traffic impact study are presented in **Table 11**. **Figure 13** and **Figure 14** graphically show the trip distribution percentages presented in **Table 11**.

The City's travel demand model (City of Stockton 2004a) was used to estimate trip distribution percentages. The travel demand model is considered to be a valid source for the trip distribution percentages because it directly addresses:

- the location of destinations of project-related trips,
- the magnitude of land uses that would attract project-related trips, and
- the quality of access to the destinations via the roadway network.

This traffic impact study includes analysis of scenarios based on two different background development conditions:

- Existing Plus Approved Projects (EPAP), and
- 2035 Cumulative Conditions.

The City's travel demand model for each of these two scenarios was used to estimate trip distribution percentages. Background (non-project) land uses are different in each of the two travel demand models. The different land uses result in different geographic distributions of travel. As a result, the trip distribution percentages are different for each of the two background development conditions. **Table 11** presents the trip distribution percentages for each of the two background development scenarios. **Figure 13** shows the distribution percentages for project-related trips with EPAP background conditions. **Figure 14** shows the distribution percentages for project-related trips with Cumulative background conditions.

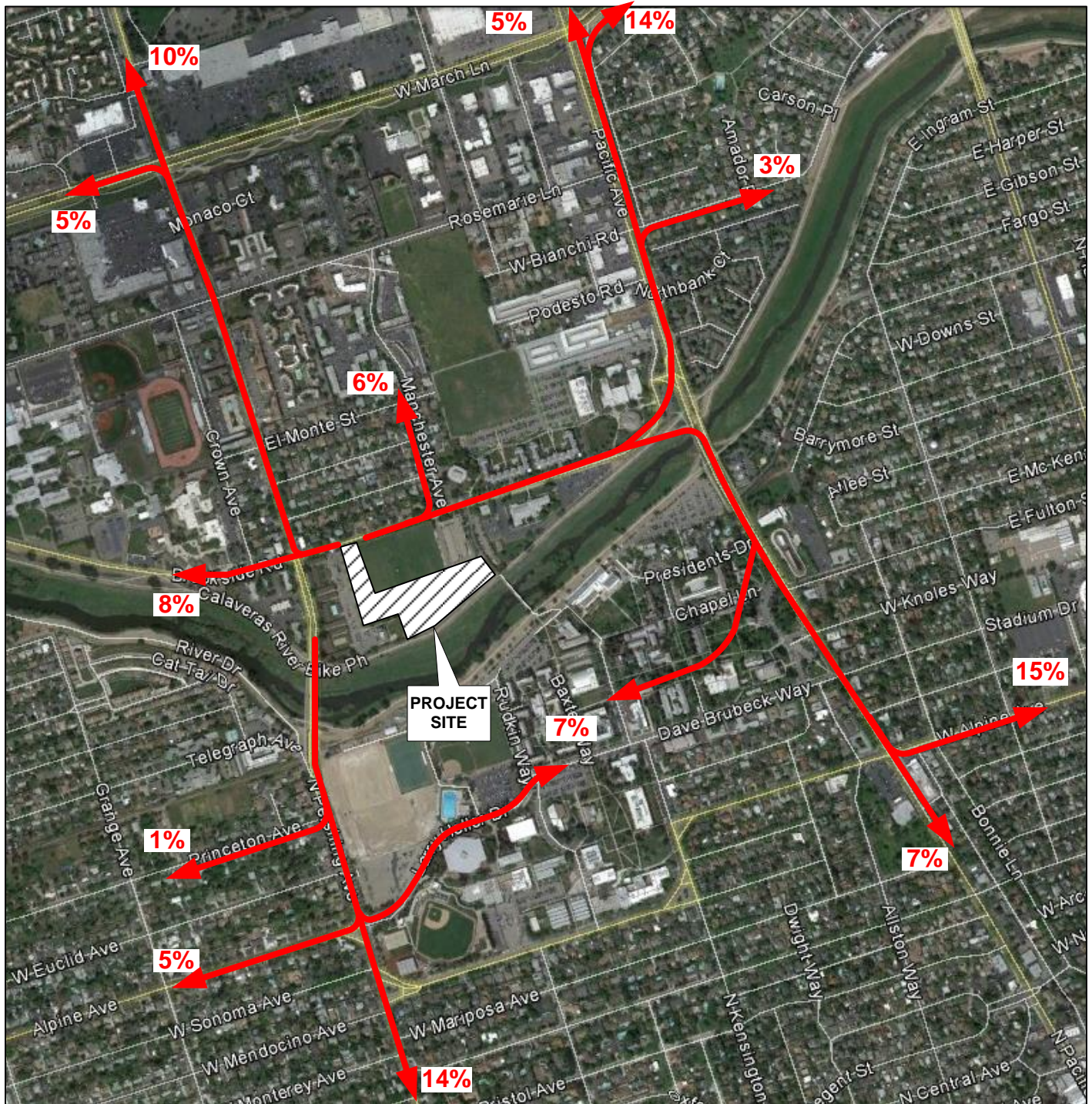
A "select link" analysis was conducted using each of the two travel demand models to determine the geographic distribution of project-related travel. The select link analysis identifies vehicle trips associated with the proposed project site, and identifies the direction of travel to and from the project site.

The trip distribution methodology described above was developed in consultation with City of Stockton staff. Initial, pre-adjustment, traffic model results used in the development of trip distribution percentages are presented in the technical appendix. To reflect the strong association between the project site and the portion of the UOP campus south of the Calaveras River, the initial traffic model results were adjusted. The adjustment involved increasing the portion of project-related trips traveling between the project site and the UOP campus south of the Calaveras River.

**Table 11. UOP Student Housing Project Trip Distribution Percentages**

Direction of Travel or Destination	Percent of Project-Related Trips	
	Existing Plus Approved Projects Background	Cumulative Background
West on March Lane	5%	5%
North on Pershing Avenue	10%	9%
North on Pacific Avenue	5%	5%
East on March Lane	14%	13%
West on Brookside Road	8%	7%
North on Manchester Avenue	6%	6%
East on Bianchi Road	3%	5%
West on Princeton Avenue	1%	1%
UOP Campus South of Calaveras River	7%	7%
West on Alpine Avenue	5%	3%
South on Pershing Avenue	14%	18%
South on Pacific Avenue	7%	8%
East on Alpine Avenue	15%	13%
<b>TOTAL</b>	100%	100%
Source: Select link analysis using the Stockton General Plan Travel Demand Model.		

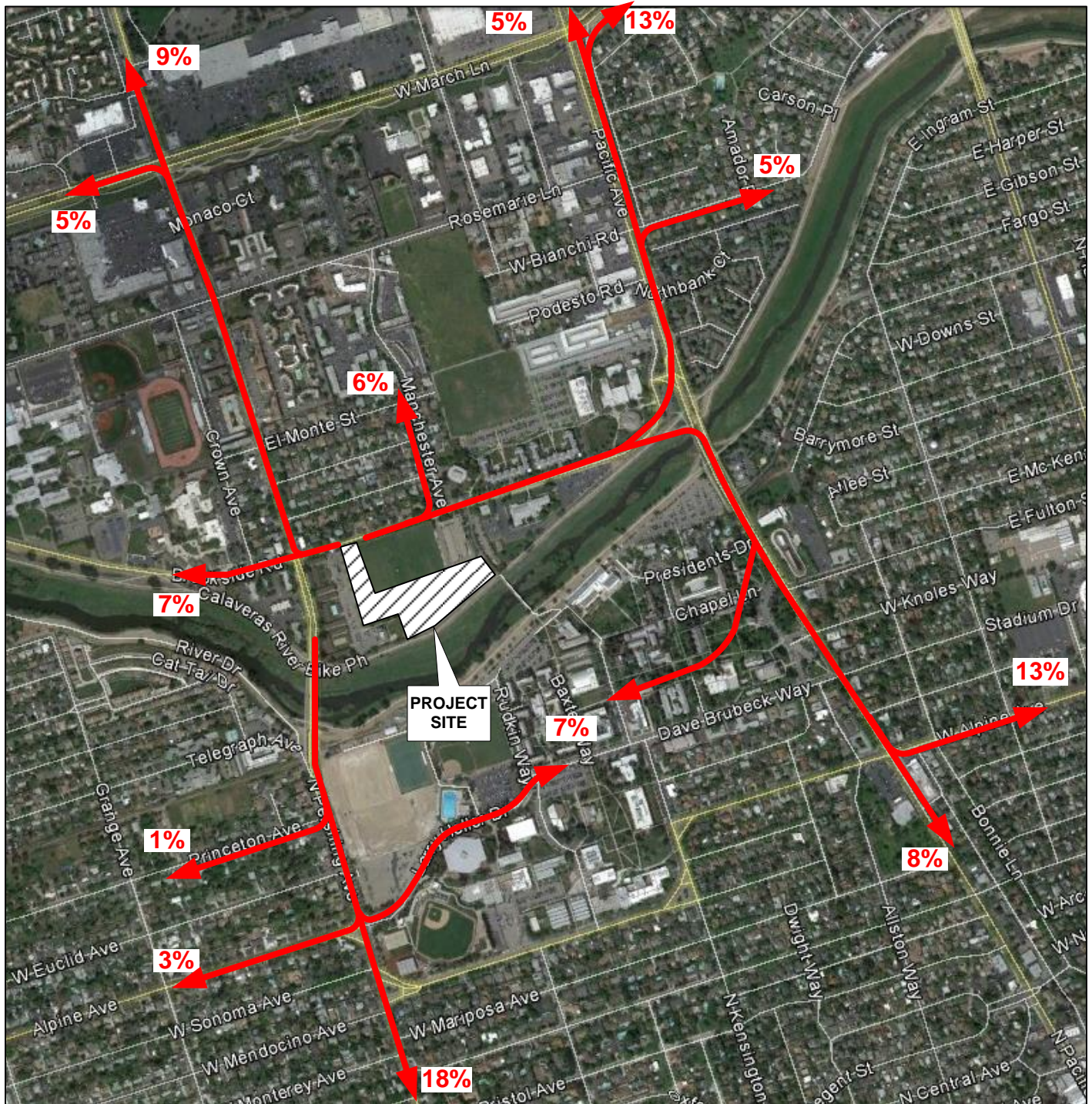




See Table 11 for description of destination areas

## EXISTING PLUS APPROVED PROJECTS PLUS PROJECT TRIP DISTRIBUTION PERCENTAGES





See Table 11 for description of destination areas

## CUMULATIVE PLUS PROJECT TRIP DISTRIBUTION PERCENTAGES

KD Anderson & Associates, Inc.  
Transportation Engineers

0780-03 LT 9/24/2015

UOP Student Housing Project Traffic Impact Study

figure 14

## **ROADWAY IMPROVEMENTS**

Because the UOP Student Housing project site is located in an area that is generally built-out, the EPAP Plus Project condition assumes no roadway improvements associated with previously-approved development projects. Because the proposed project would use the existing University Townhouse Apartments driveway for access to the roadway system, no project-related roadway improvements are assumed in the EPAP Plus Project condition.

## **TRIP ASSIGNMENT**

Traffic that would be generated by the proposed project was added to EPAP No Project volumes. **Figure 15** displays the project-related-only traffic volumes for each study intersection in the a.m. peak hour and p.m. peak hour. **Figure 16** displays the resulting EPAP Plus Project traffic volumes anticipated for each study intersection in the peak hours. The resulting daily traffic volumes for study roadway segments are shown in **Table 12**.

## **INTERSECTION LEVELS OF SERVICE**

**Table 13** presents the a.m. peak hour and p.m. peak hour LOS at each study intersection under EPAP Plus Project conditions. The worksheets presenting the calculation of LOS are included in the technical appendix.

Traffic volumes under EPAP Plus Project conditions would be generally higher than under EPAP No Project conditions and, as a result, vehicle delay at study intersections under EPAP Plus Project conditions would be higher than under EPAP No Project conditions.

Under EPAP Plus Project conditions, LOS at all seven study intersections would be at acceptable LOS D or better during both the a.m. peak hour and the p.m. peak hour. Therefore, the impact of the UOP Student Housing project with EPAP background conditions is considered to be less than significant. No mitigation measures are required.

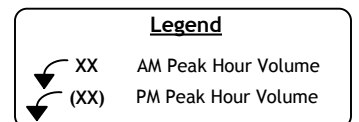
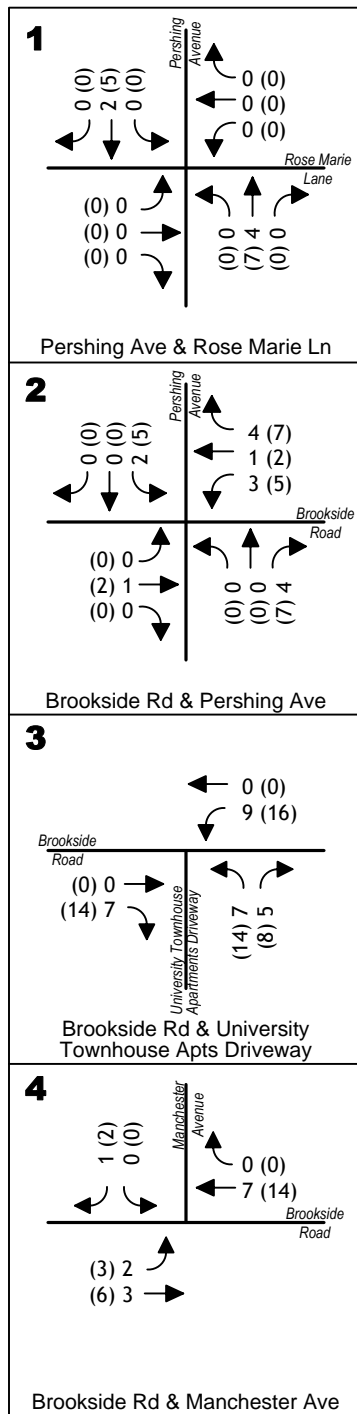
## **ROADWAY SEGMENT LEVELS OF SERVICE**

**Table 12** presents a summary of LOS on the seven study roadway segments under EPAP Plus Project conditions. The following three roadway segments would operate at acceptable LOS A:

- Brookside Road from Pershing Avenue to Pacific Avenue,
- Alpine Avenue west of Pershing Avenue, and
- Larry Heller Drive east of Pershing Avenue.

No improvements are needed on these three roadway segments to achieve acceptable LOS. The impact of the UOP Student Housing project on these roadway segments is considered less than significant. No mitigation measures are required.





## PROJECT RELATED TRIPS FOR EXISTING PLUS APPROVED PROJECTS BACKGROUND

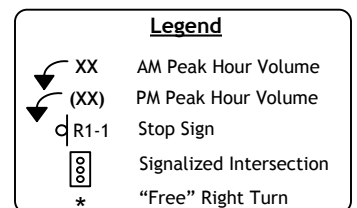
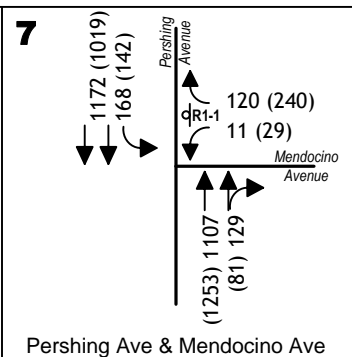
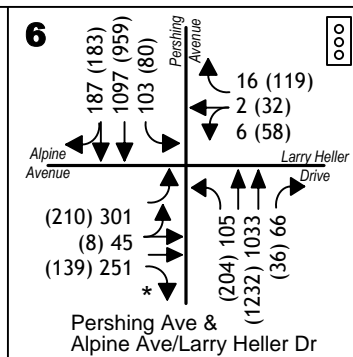
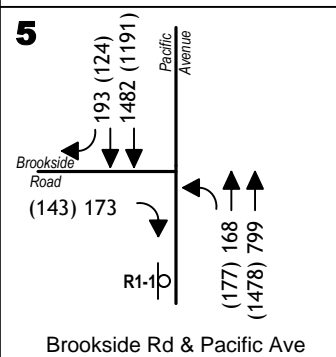
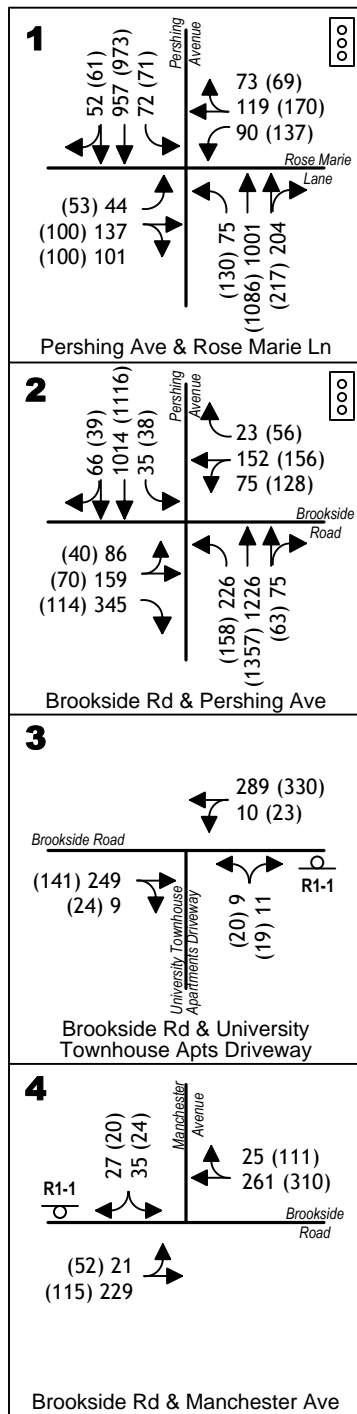
KD Anderson & Associates, Inc.  
Transportation Engineers

0780-03 LT 9/24/2015

UOP Student Housing Project Traffic Impact Study

figure 15





# EXISTING PLUS APPROVED PROJECTS PLUS UOP STUDENT HOUSING PROJECT CONDITIONS TRAFFIC VOLUMES AND LANE CONFIGURATIONS

**Table 12. Roadway Segment Level of Service -  
EPAP Plus Project Conditions**

Roadway Segment	Number of Lanes	Daily Capacity	Daily Volume	V/C Ratio	Level of Service
1 Pershing Avenue north of Brookside Road	4	38,200	33,462	0.88	E
2 Brookside Road Pershing Avenue to Pacific Avenue	2	13,200	5,470	0.41	A
3 Pershing Avenue over the Calaveras River	4	38,200	35,391	0.93	E
4 Pacific Avenue south of Brookside Road	4	38,200	35,472	0.93	E
5 Alpine Avenue west of Pershing Avenue	4	36,300	9,216	0.25	A
6 Larry Heller Drive east of Pershing Avenue	2	13,200	3,272	0.25	A
7 Pershing Avenue south of Alpine Ave. / Larry Heller Dr.	4	38,200	33,950	0.89	E
Notes: "V/C Ratio" = volume-to-capacity ratio.					

**Table 13. Intersection Level of Service - EPAP Plus Project Conditions**

Study Intersections	Inters. Control	Signal Warrant Met?	AM Peak		PM Peak	
			LOS	Delay	LOS	Delay
1 Pershing Avenue & Rose Marie Lane	Signal		B	17.1	B	19.7
2 Brookside Road & Pershing Avenue	Signal		D	47.2	D	52.5
3 Brookside Road & University Townhouse Apartments Driveway	Unsig	No	A	0.5	A	1.1
4 Brookside Road & Manchester Avenue	Unsig	No	A	1.6	A	1.6
5 Brookside Road & Pacific Avenue	Unsig	Yes	A	3.5	A	1.9
6 Pershing Avenue & Alpine Avenue / Larry Heller Drive	Signal		B	15.4	C	20.3
7 Pershing Avenue & Mendocino Avenue	Unsig	Yes	A	2.8	A	9.1
<p>Notes: LOS = Level of Service. "Inters. Control" = Type of intersection control.  "Signal" = Signalized light control. "Unsig" = Unsignalized stop-sign control.  Delay is measured in seconds per vehicle. Per City of Stockton guidelines, intersection average delay is reported for all intersections, including unsignalized intersections.</p>						

The following three study roadway segments would operate at LOS E under EPAP Plus Project conditions:

- Pershing Avenue over the Calaveras River,
- Pacific Avenue south of Brookside Road, and
- Pershing Avenue south of Alpine Avenue / Larry Heller Drive.

These three roadway segments would also operate at LOS E under EPAP No Project conditions, the proposed project would not change LOS on these roadway segments. As described previously in the *Level of Service Significance Threshold* section of this traffic impact study, LOS E is considered by the City of Stockton to be acceptable on these three roadway segments. Therefore, no improvements are needed on these study roadway segments to achieve acceptable LOS. The impact of the UOP Student Housing project on these roadway segments is considered less than significant. No mitigation measures are required.

As shown in **Table 12**, the roadway segment Pershing Avenue north of Brookside Road would operate at LOS E under EPAP Plus Project conditions. LOS E is considered to be unacceptable by the City of Stockton. However, the UOP Student Housing project would increase traffic volumes on this roadway segment by 0.5 percent, compared to EPAP No Project conditions. As described previously in the *Level of Service Significance Threshold* section of this traffic impact study, if a roadway segment operates at LOS E or F without the project, an impact is considered significant if the addition of project traffic causes an increase of greater than five percent in traffic volumes. Because the project-related increase in traffic volumes is not greater than five percent, the impact of the UOP Student Housing project on this roadway segment is considered less than significant. No mitigation measures are required.

### **INCREASE IN DEMAND FOR PARKING**

Implementation of the UOP Student Housing project would increase the demand for vehicle parking.

Parking demand estimates for traffic impact studies are often based on industry-standard reference documents, such as the ITE publication *Parking Generation, 4<sup>th</sup> Edition* (Institute of Transportation Engineers 2010). Like the ITE publication *Trip Generation Manual, 9<sup>th</sup> Edition*, referenced earlier in this traffic impact study, industry-standard documents on parking demand contain information on common land uses. *Parking Generation, 4<sup>th</sup> Edition* contains information on tennis courts, such as the Hal Nelson tennis courts which would be removed by the UOP Student Housing project. *Parking Generation, 4<sup>th</sup> Edition*, however, does not contain information on less-common land uses such as the proposed student housing.

For this traffic impact study, estimates of the reduction in parking demand associated with removal of the Hal Nelson tennis courts were based on information from *Parking Generation, 4<sup>th</sup> Edition*. Tennis courts are included in the ITE document as land use code 490.



Parking demand estimates for the student housing portion of the UOP Student Housing project were based on project-specific and site-specific empirical information. The calculation of parking demand rates for the student housing portion of the proposed project is presented in **Table 14**. The following is a description of the calculation. To establish parking demand estimates directly applicable to student housing at UOP on the north side of the Calaveras River, parking utilization data were collected at parking lots 14 and 29, which serve the University Townhouse Apartment and Theta Chi fraternity house; and at lot 10, which serves the Monagan Hall and Chan Family Hall student residence facilities. The parking utilization data were collected on Tuesday September 1, 2015. Because parking lots 14, 29, and 10 serve student housing uses, utilization is highest late at night. The parking utilization data collected for this traffic impact study was collected at approximately 10:00 p.m.

To develop parking utilization rates associated with the number of student housing beds, the number of beds occupied at the University Townhouse Apartment, Theta Chi fraternity house, Monagan Hall and Chan Family Hall student residence facilities on September 1, 2015 was also established. Parking demand for student housing is considered to be strongly associated with the number of occupied beds, resulting in occupied beds being the independent variable for the student housing parking demand generation rates.

As shown in **Table 14**, 65 parking spaces in lots 14 and 29 were observed to be occupied when 144 beds were occupied at the University Townhouse Apartment and Theta Chi fraternity house. The number of occupied parking spaces was divided by the number of occupied beds to calculate parking demand rate. This results in a parking demand rate of 0.4514 parking spaces per occupied bed for lots 14 and 29. As also shown in **Table 14**, 246 parking spaces in lot 10 were observed to be occupied when 374 beds were occupied at the Monagan Hall and Chan Family Hall student residence facilities. This results in a parking demand rate of 0.6578 parking spaces per occupied bed for lot 10.

As shown in **Table 14**, the lot-to-lot variation common in parking demand was minimized by calculating a weighted average of rates for lots 14, 29, and 10. The site specific weighted average parking demand rate for student housing at UOP is estimated to be 0.6004 parking spaces per occupied bed.

**Table 15** presents an estimate of parking demand with implementation of the UOP Student Housing project, which includes removal of the Hal Nelson tennis courts. The estimate of parking demand also includes full occupancy of currently vacant units in the University Townhouse Apartment. The resulting components of parking demand, therefore, include:

- the existing use level of parking lots 14 and 29,
- increased use of parking lots 14 and 29 due to full occupancy of the University Townhouse Apartments,
- increased use associated with the new UOP Student Housing project units, and
- decreased use associated with the removal of the Hal Nelson tennis courts.



**Table 14. Parking Demand Rates**

<b>Demand Factor</b>	<b>Quantity</b>
<u>University Townhouse Apartments and Theta Chi Fraternity</u>	
Occupied Parking Spaces Observed in Lots 14 and 29	65
Occupied Beds at University Townhouse Apartments and Theta Chi Fraternity	144
Parking Demand Rate for Lots 14 and 29 in Parking Spaces per Occupied Bed	0.4514
<u>Monagan Hall and Chan Family Hall</u>	
Occupied Parking Spaces Observed in Lot 10	246
Occupied Beds at University Townhouse Apartments and Theta Chi Fraternity	374
Parking Demand Rate for Lot 10 in Parking Spaces per Occupied Bed	0.6578
<u>Weighted Average for Student Housing</u>	
Weighted Average Parking Demand Rate in Parking Spaces per Occupied Bed (Calculated as Weighted Average of Lots 14, 29, and 10)	0.6004
<u>Tennis Courts</u>	
Parking Demand Rate for Tennis Courts in Parking Spaces per Court (Source: Institute of Transportation Engineers 2010)	2.5

**Table 15. Parking Demand and Supply**

<b>Demand and Supply Factor</b>	<b>Quantity</b>
University Townhouse Apartments and Theta Chi Fraternity - Spaces Currently Occupied	65
University Townhouse Apartments and Theta Chi Fraternity - Additional Spaces with Full Occupancy of Beds	28
Spaces Occupied With Proposed UOP Student Housing Project Units	229
Demand Reduced with Removal of Hal Nelson Tennis Courts	-20
	_____
Total Demand With UOP Student Housing Project	302
Proposed Parking Supply With UOP Student Housing Project	314
	_____
<b>Surplus or (Deficit)</b>	<b>12</b>

As shown in **Table 15**, the resulting total demand for parking would be 302 parking spaces.

As described in the *Project Description* section of this traffic impact study, the UOP Student Housing project includes expansion of parking lots 14 and 29 from 153 spaces to 314 spaces. A comparison of estimated parking demand and supply for the proposed expanded lots 14 and 29 is shown in **Table 15**. Implementation of the UOP Student Housing project is expected to result in a surplus of 12 parking spaces. Because the expected demand for parking is expected to be less than the proposed supply, this impact is considered to be less than significant. No mitigation measures are required.

### **INCREASE IN DEMAND FOR TRANSIT**

Implementation of the proposed UOP Student Housing project would result in an increase in demand for public transit service. As described earlier in the *Public Transportation* section of this traffic impact study, the project site is served by five public transit routes operated by SJRTD. SJRTD transfer points are currently located on the UOP campus and at the intersection of Brookside Road and Pershing Avenue. The frequency and proximity of transit service is considered to be adequate to serve the expected increase in demand for transit service. Therefore, this impact is considered to be less than significant. No mitigation measures are required.

### **INCREASE IN DEMAND FOR BICYCLE AND PEDESTRIAN FACILITIES**

Implementation of the UOP Student Housing project would result in an increase in demand for bicycle and pedestrian facilities. As noted in the *Bicycle and Pedestrian Systems* section of this traffic impact study, the area of the project site is currently served by a network of bicycle and pedestrian facilities. Adjacent to the project site is a Class I bike path along the Calaveras River and a dedicated bicycle and pedestrian bridge across the Calaveras River to the portion of the UOP campus south of the river. With the network of facilities in the area, and the dedicated facilities adjacent to the project site, the increase in demand for bicycle and pedestrian travel is expected to be adequately served. Therefore, the increase in demand for bicycle and pedestrian travel is considered a less-than-significant impact. No mitigation measures would be required.

### **SITE CIRCULATION AND ACCESS**

Site circulation and access were reviewed for this traffic impact study. The following aspects were reviewed:

- site access and interface with roadway network,
- emergency vehicle access and circulation,
- vehicular circulation and roadway sizing within the site,
- pedestrian access and circulation within and adjacent to the site,

- bicycle access and circulation within and adjacent to the site,
- transit access adjacent to the site, and
- pedestrian access to and from transit stops.

The UOP Student Housing project site would use the existing University Townhouse Apartments driveway on Brookside Road to access the roadway network. The driveway intersection on Brookside Road would operate at LOS A under all scenarios. Because of relatively low traffic volumes on the driveway, the 95<sup>th</sup> percentile queue length on the driveway would be less than one vehicle in length.

Emergency vehicle access and circulation would be provided by routes both north and south of the proposed new student housing structures. Access to both the north and south routes from the roadway network would be provided by connections on both the west and east ends of the north and south routes.

On-site vehicle circulation would occur within the expanded parking lots 14 and 29. The size of circulation routes would be adequate.

On-site bicycle and pedestrian access and circulation would be provided by dedicated routes north and south of the proposed new student housing structures. As noted earlier in the *Increase in Demand for Bicycle and Pedestrian Facilities* section of this traffic impact study, access to surrounding land uses is considered to be adequate.

As noted earlier in the *Increase in Demand for Transit* section of this traffic impact study, access to public transit service is considered to be adequate.

For the reasons listed above, site circulation and access is considered to be adequate and the impact is considered to be less than significant. No mitigation measures are required.

## **CUMULATIVE NO PROJECT CONDITIONS**

The Cumulative No Project condition represents a long-term future background condition. Development of land uses and roadway improvements associated with the City's General Plan in the year 2035 are assumed in this condition. The Cumulative No Project condition, therefore, serves as the baseline condition used to assess the significance of long-term project-related traffic impacts.

The Cumulative No Project condition assumes application of the City's General Plan land use and roadway system. The sources of information on the land use and roadway improvements assumed in the analysis of Cumulative No Project condition are:

- the City of Stockton website for the General Plan (<http://www.stocktongov.com/government/departments/communityDevelop/cdPlanGen.html>);
- documentation of the City's travel demand model, in particular the General Plan Update Preferred Alternative 2035 model (City of Stockton 2004a); and
- consultation with City of Stockton staff, providing clarification, updates, and details on assumed roadway widths.

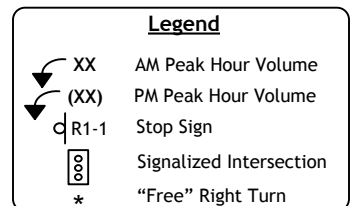
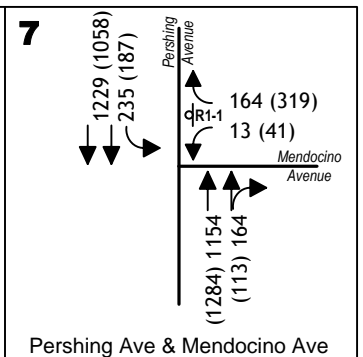
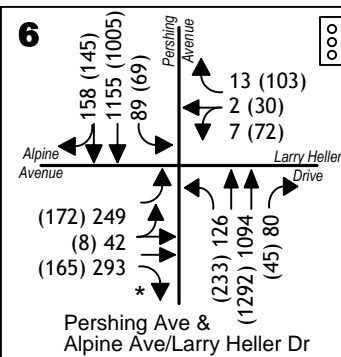
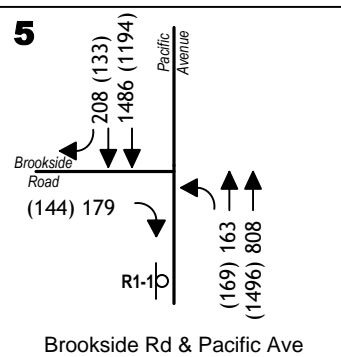
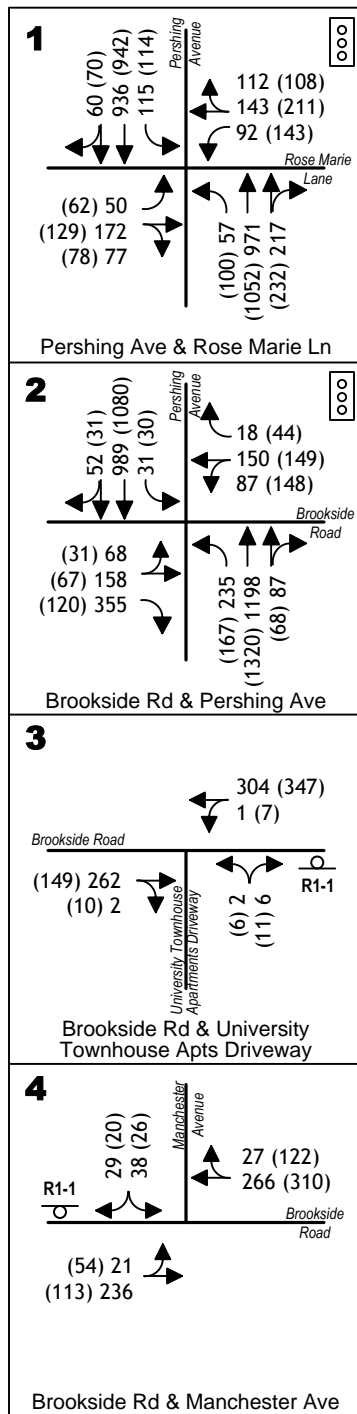
The Cumulative No Project condition does not include development of the UOP Student Housing project as proposed. To serve as baseline condition for determining project-related impacts in the context of the General Plan, the traffic analysis of this condition assumes the land uses on the project site that were included in the General Plan EIR traffic analysis (City of Stockton 2006).

## **TRAFFIC VOLUME FORECASTS**

As previously described in the *Travel Forecasting* section of this traffic impact study, the City of Stockton Travel Demand Model (City of Stockton 2004a) was used to develop forecasts of background increases in traffic volumes under Cumulative No Project conditions. The increases in traffic volumes reflect development of land uses consistent with the City's General Plan. The model was modified in the vicinity of the project site to add detail to the model and more accurately represent how land uses are provided access to the roadway network. Minor changes were also made to land uses in the model.

Application of the methods described in the *Travel Forecasting* section results in the a.m. peak hour and p.m. peak hour traffic intersection volumes presented in **Figure 17**, and the daily traffic volumes presented in **Table 16**.





# CUMULATIVE NO UOP STUDENT HOUSING PROJECT CONDITIONS TRAFFIC VOLUMES AND LANE CONFIGURATIONS



**Table 16. Roadway Segment Level of Service -  
Cumulative No Project Conditions**

Roadway Segment	Number of Lanes	Daily Capacity	Daily Volume	V/C Ratio	Level of Service
1 Pershing Avenue north of Brookside Road	4	38,200	32,147	0.84	D
2 Brookside Road Pershing Avenue to Pacific Avenue	2	13,200	5,489	0.42	A
3 Pershing Avenue over the Calaveras River	4	38,200	35,069	0.92	E
4 Pacific Avenue south of Brookside Road	4	38,200	35,568	0.93	E
5 Alpine Avenue west of Pershing Avenue	4	36,300	8,959	0.25	A
6 Larry Heller Drive east of Pershing Avenue	2	13,200	3,222	0.24	A
7 Pershing Avenue south of Alpine Ave. / Larry Heller Dr.	4	38,200	35,611	0.93	E
Notes: "V/C Ratio" = volume-to-capacity ratio.					

The UOP Student Housing project site is located in an area that is generally built-out with little vacant land. Future land use development in the area is expected to be limited. As a result, the travel demand model does not forecast large increases in traffic volumes under Cumulative No Project conditions. In general, the model forecasts north-south traffic volumes in the area to increase by approximately four percent to 10 percent. In general, the model forecasts changes in east-west traffic volumes ranging from a decrease of nine percent of an increase of 20 percent.

## **ROADWAY IMPROVEMENTS**

Because the UOP Student Housing project site is located in an area that is generally built-out, the Cumulative No Project condition assumes no future roadway improvements.

The intersection lane geometrics assumed for Cumulative No Project conditions are shown in **Figure 16**. The resulting number of travel lanes assumed for study roadway segments are shown in **Table 16**.

## **INTERSECTION LEVELS OF SERVICE**

**Table 17** presents the a.m. peak hour and p.m. peak hour LOS at each study intersection under Cumulative No Project conditions. The worksheets presenting the calculation of LOS are included in the technical appendix.

Under Cumulative No Project condition, LOS at six of the seven study intersections would be at acceptable LOS D or better during both the a.m. peak hour and the p.m. peak hour. No improvements are needed to achieve acceptable LOS at these intersections.

Under Cumulative No Project conditions, the intersection of Brookside Road and Pershing Avenue would operate at LOS D during the a.m. peak hour and LOS E during the p.m. peak hour. As described previously in the *Level of Service Significance Threshold* section of this traffic impact study, LOS E is considered by the City of Stockton to be acceptable at this intersection. Therefore, no improvement is needed at this study intersection to achieve acceptable LOS.

## **ROADWAY SEGMENT LEVELS OF SERVICE**

**Table 16** presents a summary of LOS on the seven study roadway segments under Cumulative No Project conditions. Four of the roadway segments would operate at acceptable LOS D or better. No improvements are needed on these three roadway segments to achieve acceptable LOS.

The following three study roadway segments would operate at LOS E under Cumulative No Project conditions:

- Pershing Avenue over the Calaveras River,
- Pacific Avenue south of Brookside Road, and
- Pershing Avenue south of Alpine Avenue / Larry Heller Drive.

As described previously in the *Level of Service Significance Threshold* section of this traffic impact study, LOS E is considered by the City of Stockton to be acceptable on these three roadway segments. Therefore, no improvements are needed on these study roadway segments to achieve acceptable LOS.

**Table 17. Intersection Level of Service - Cumulative No Project Conditions**

Study Intersections	Inters. Control	Signal Warrant Met?	AM Peak		PM Peak	
			LOS	Delay	LOS	Delay
1 Pershing Avenue & Rose Marie Lane	Signal		B	18.9	C	21.6
2 Brookside Road & Pershing Avenue	Signal		D	50.9	E	56.3
3 Brookside Road & University Townhouse Apartments Driveway	Unsig	No	A	0.2	A	0.4
4 Brookside Road & Manchester Avenue	Unsig	No	A	1.6	A	1.6
5 Brookside Road & Pacific Avenue	Unsig	Yes	A	3.6	A	1.8
6 Pershing Avenue & Alpine Avenue / Larry Heller Drive	Signal		B	14.0	B	19.0
7 Pershing Avenue & Mendocino Avenue	Unsig	Yes	A	5.9	D	26.9
<p>Notes: LOS = Level of Service. "Inters. Control" = Type of intersection control.            "Signal" = Signalized light control. "Unsig" = Unsignalized stop-sign control.            Delay is measured in seconds per vehicle. Per City of Stockton guidelines, intersection average delay is reported for all intersections, including unsignalized intersections.</p>						

## **CUMULATIVE PLUS PROJECT IMPACTS**

The analysis of Cumulative Plus Project conditions describes long-term traffic operations assuming both the City's General Plan in the year 2035 and the proposed UOP Student Housing project. Comparing traffic operation under this condition to traffic operations under Cumulative No Project conditions allows an identification of the long-term project-related effects of the proposed project.

The development of the UOP Student Housing project would result in vehicle traffic to and from the project site. Methods used to estimate project-related travel have been previously described in the *Existing Plus Approved Projects Plus UOP Student Housing Project Impacts* section of this traffic impact study. **Figure 18** displays the project-related-only traffic volumes for each study intersection in the a.m. peak hour and p.m. peak hour under long-term Cumulative conditions. The project-related traffic volumes were added to traffic volumes for the Cumulative No Project condition. **Figure 19** displays the resulting Cumulative Plus Project traffic volumes anticipated for each study intersection in the peak hours. **Table 18** displays the resulting Cumulative Plus Project roadway segment daily traffic volumes.

Development of forecasts of future year background traffic volumes has been previously described in the *Cumulative No Project Conditions* section of this traffic impact study.

Project-related roadway improvements and future year background roadway improvements assumed in this analysis have been previously described in the *Existing Plus Approved Projects Plus UOP Student Housing Project Impacts* and the *Cumulative No Project Conditions* sections of this traffic impact study, respectively.

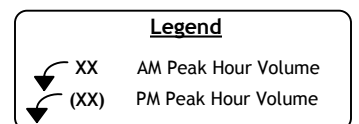
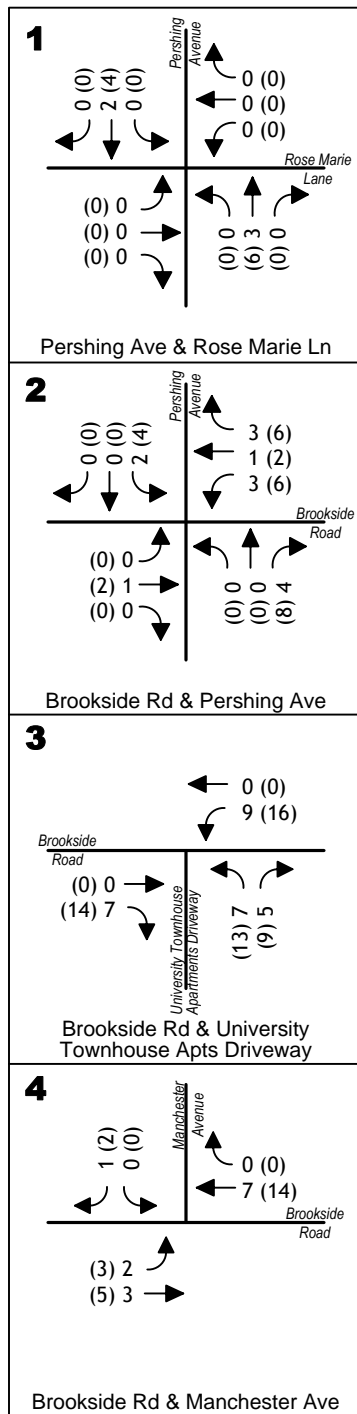
## **INTERSECTION LEVELS OF SERVICE**

**Table 19** presents the a.m. peak hour and p.m. peak hour LOS at each study intersection under Cumulative Plus Project conditions. The worksheets presenting the calculation of LOS are included in the technical appendix.

Under Cumulative Plus Project conditions, LOS at six of the seven study intersections would be at acceptable LOS D or better during both the a.m. peak hour and the p.m. peak hour. Therefore, the impact of the UOP Student Housing project with Cumulative background conditions is considered less than significant at these six intersections. No mitigation measures are required.

The intersection of Brookside Road and Pershing Avenue would operate at LOS D during the a.m. peak hour and LOS E during the p.m. peak hour. As described previously in the *Level of Service Significance Threshold* section of this traffic impact study, LOS E is considered by the City of Stockton to be acceptable at this intersection. Therefore, no improvements are needed at this intersection to achieve acceptable LOS. The impact of the UOP Student Housing project with Cumulative background conditions at this intersection is considered less than significant. No mitigation measures are required.





## PROJECT RELATED TRIPS FOR CUMULATIVE BACKGROUND

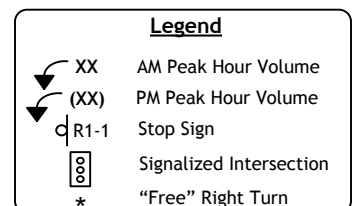
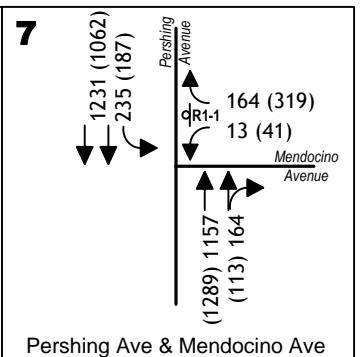
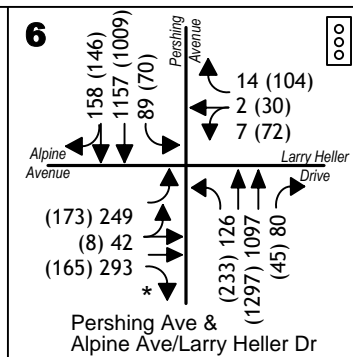
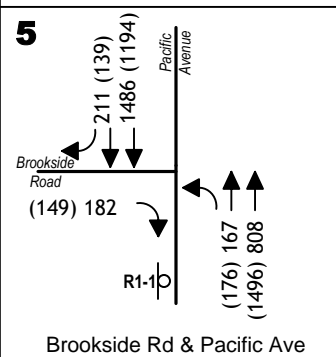
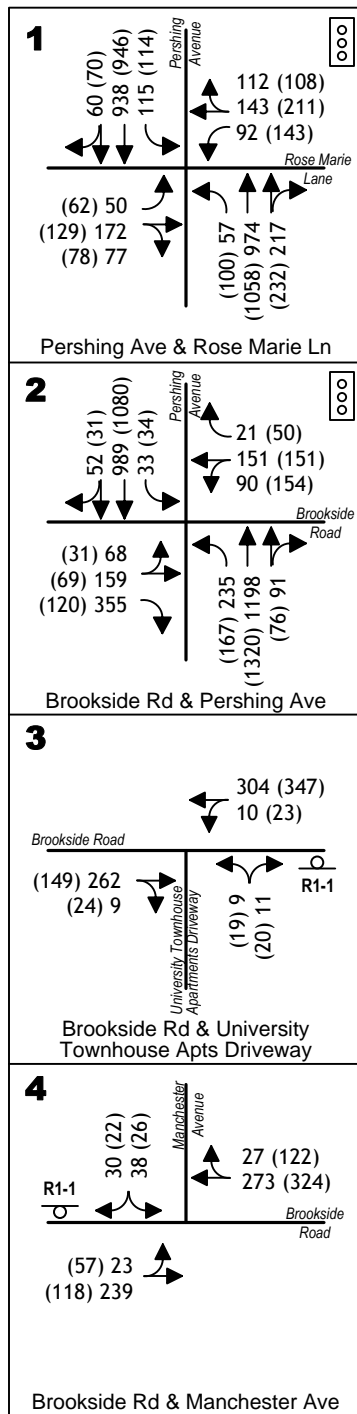
KD Anderson & Associates, Inc.  
Transportation Engineers

0780-03 LT 9/24/2015

UOP Student Housing Project Traffic Impact Study

figure 18





# CUMULATIVE PLUS UOP STUDENT HOUSING PROJECT CONDITIONS TRAFFIC VOLUMES AND LANE CONFIGURATIONS



**Table 18. Roadway Segment Level of Service -  
Cumulative Plus Project Conditions**

Roadway Segment	Number of Lanes	Daily Capacity	Daily Volume	V/C Ratio	Level of Service
1 Pershing Avenue north of Brookside Road	4	38,200	32,292	0.85	D
2 Brookside Road Pershing Avenue to Pacific Avenue	2	13,200	5,729	0.43	A
3 Pershing Avenue over the Calaveras River	4	38,200	35,243	0.92	E
4 Pacific Avenue south of Brookside Road	4	38,200	35,736	0.94	E
5 Alpine Avenue west of Pershing Avenue	4	36,300	8,979	0.25	A
6 Larry Heller Drive east of Pershing Avenue	2	13,200	3,246	0.25	A
7 Pershing Avenue south of Alpine Ave. / Larry Heller Dr.	4	38,200	35,733	0.94	E
Notes: "V/C Ratio" = volume-to-capacity ratio.					

**Table 19. Intersection Level of Service - Cumulative Plus Project Conditions**

Study Intersections	Inters. Control	Signal Warrant Met?	AM Peak		PM Peak	
			LOS	Delay	LOS	Delay
1 Pershing Avenue & Rose Marie Lane	Signal		B	18.9	C	21.6
2 Brookside Road & Pershing Avenue	Signal		D	52.1	E	59.7
3 Brookside Road & University Townhouse Apartments Driveway	Unsig	No	A	0.5	A	1.1
4 Brookside Road & Manchester Avenue	Unsig	No	A	1.7	A	1.7
5 Brookside Road & Pacific Avenue	Unsig	Yes	A	3.7	A	1.9
6 Pershing Avenue & Alpine Avenue / Larry Heller Drive	Signal		B	14.0	B	19.1
7 Pershing Avenue & Mendocino Avenue	Unsig	Yes	A	6.0	D	27.3
<p>Notes: LOS = Level of Service. "Inters. Control" = Type of intersection control.            "Signal" = Signalized light control. "Unsig" = Unsignalized stop-sign control.            Delay is measured in seconds per vehicle. Per City of Stockton guidelines, intersection average delay is reported for all intersections, including unsignalized intersections.</p>						

## **ROADWAY SEGMENT LEVELS OF SERVICE**

**Table 17** presents a summary of LOS on the seven study roadway segments under Cumulative Plus Project conditions. The following four roadway segments would operate at acceptable LOS D or better:

- Pershing Avenue north of Brookside Road,
- Brookside Road from Pershing Avenue to Pacific Avenue,
- Alpine Avenue west of Pershing Avenue, and
- Larry Heller Drive east of Pershing Avenue.

No improvements are needed on these four roadway segments to achieve acceptable LOS. The impact of the UOP Student Housing project on these roadway segments with Cumulative background conditions is considered less than significant. No mitigation measures are required.

The following three study roadway segments would operate at LOS E under Cumulative Plus Project conditions:

- Pershing Avenue over the Calaveras River,
- Pacific Avenue south of Brookside Road, and
- Pershing Avenue south of Alpine Avenue / Larry Heller Drive.

As described previously in the *Level of Service Significance Threshold* section of this traffic impact study, LOS E is considered by the City of Stockton to be acceptable on these three roadway segments. Therefore, no improvements are needed on these study roadway segments to achieve acceptable LOS. The impact of the UOP Student Housing project on these roadway segments with Cumulative background conditions is considered less than significant. No mitigation measures are required.

## REFERENCES

### DOCUMENTS CITED

California Department of Transportation. 2014. California Manual on Uniform Traffic Control Devices 2014 Edition. Sacramento CA.

Commute Connection. 2015. Commute Connection internet website. <http://www.commuteconnection.com/default.htm>

Institute of Transportation Engineers. 2010. Parking Generation, 4<sup>th</sup> Edition. Washington, D.C.

Institute of Transportation Engineers. 2012. Trip Generation Manual, 9<sup>th</sup> Edition. Washington, D.C.

San Joaquin Regional Transit District. 2015. San Joaquin Regional Transit District Internet Webpage. <http://www.sanjoaquinrtd.com/>. Stockton, CA.

Spack Consulting. 2012. Technical Memorandum – Trip Generation Study – Private Student Housing Apartments. St. Louis Park, MN.

Stockton, City of. 2003. City of Stockton Transportation Impact Analysis Guidelines. Stockton, CA.

Stockton, City of. 2004a. Travel Demand Model Development Report October 2004. Stockton, CA.

Stockton, City of. 2004b. October 26, 2004 memorandum to Mayor and City Council from the City of Stockton Public Works Department. Subject: Adopt an Ordinance Establishing Residential Permit Parking With the City of Stockton for Trial Period Until December 31, 2005, and Adopt a Resolution Establishing Residential Permit Parking Within the Caldwell Village Area. Stockton, CA.

Stockton, City of. 2004c. Stockton City Council Resolution 04-0739 Establishing Residential Permit Parking Within the Caldwell Village Area, Effective December 1, 2004. Stockton, CA.

Stockton, City of. 2006. City of Stockton General Plan Update Draft Environmental Impact Report. Stockton, CA.

Stockton, City of. 2007a. Stockton General Plan 2035 Background Report. Stockton, CA.

Stockton, City of. 2007b. Stockton General Plan Goals & Policies Report. Stockton, CA.

Stockton, City of. 2010. Existing and Future Bikeway Plan. Stockton, CA.

Stockton, City of. 2015. City of Stockton Internet Website – Parking Permits – UOP Caldwell Village Area (Internal Only). <http://user.govoutreach.com/stockton/faq.php?cid=5058>. Stockton, CA.

Trafficware. 2015. Trafficware Internet Website. <http://www.trafficware.com/>

Transportation Research Board. 1982. National Cooperative Highway Research Program (NCHRP) Report 255, Highway Traffic Data for Urbanized Area Project Planning and Design. Washington, D.C.

Transportation Research Board. 2000. Special Report 209, Highway Capacity Manual 2000. Washington, D.C.

### **PERSONAL COMMUNICATIONS**

Chitsazan, Parviz, P.E. City of Stockton Public Works Department, Traffic Engineering. September 11, 2015 E-mail message to Mike Becker, KD Anderson & Associates, and September 17, 2015 telephone conversation with Wayne Shijo, KD Anderson & Associates.

Henry, Matt and Julie Morgan. Fehr & Peers. January 19, 2005 Draft Technical Memorandum to Steve Escobar and Gregg Meissner, City of Stockton. Stockton General Plan – Revised Alternatives Analysis.

McDowell, Mike. Planning Manager. City of Stockton, Planning and Engineering Services, Community Development Department. July 21, 2015 E-mail message to Wayne Shijo, KD Anderson & Associates.

Panos, Kosdatinos. University of the Pacific Department of Public Safety. August 13, 2015 meeting at University of the Pacific Residential Life & Housing Office. September 2, 2015 E-mail message to Wayne Shijo, KD Anderson & Associates.

**TECHNICAL APPENDICES**  
**(in Electronic Form on CD)**

This information is available for review at the offices of the Stockton Department of Community Development, 345 N El Dorado Street, Stockton. 209-937-8266.